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ABSTRACT

A study identified factors influencing placement of former secondary vocational education students in jobs related to their training. Findings also described educational and community processes appearing to influence job placement. Data came from a literature review, analysis of existing data, case studies, and mail questionnaires. Case studies were conducted in eight local education agencies (LEAs) in seven states. Existing data for all 50 states and 586 LEAs were analyzed. Mail questionnaires were received from 5,062 individuals representing 10 respondent groups in 62 LEAs in the seven states. Data indicated higher job placement in schools where administrators, counselors, and teachers believe job placement is a purpose of vocational education programs and is their responsibility; admission to vocational education programs is restricted to students with high interest and potential; there is a high demand for workers in the surrounding labor market area; manufacturing is a major community industry; the community has a mix of industry sizes; needs assessment surveys are frequently used to plan and evaluate vocational education programs; teachers have regular contact with employers regarding job placement; students participate in youth organizations and acquire job readiness training and basic education skills; and the vocational education curriculum is oriented to employers' needs. (Appendixes include instruments, data tables, and bibliography). (YLB)

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FACTORS RELATING TO THE JOB PLACEMENT OF FORMER SECONDARY VOCATIONAL EDUCATION STUDENTS

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1981

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TABLE OF CONTENTS

Page

LIST OF TABLES.................................... v

LIST OF FIGURES.................................... xv

FOREWORD.................................... xvii

EXECUTIVE SUMMARY.................................... xix

I. PURPOSE AND OVERVIEW OF STUDY.................... 1
    Need.................................... 1
    Goals and Objectives.................................... 2
        Dependent Variable.................................... 2
    Conceptual Framework.................................... 2
    Issue Areas.................................... 4
    Research Questions.................................... 5

II. STUDY PROCEDURES.................................... 17
    Study Approaches.................................... 17
        Literature Review.................................... 17
        The Sampling Plan.................................... 19
        Analysis of Existing Data.................................... 23
        Case Studies.................................... 37
        Mail Questionnaire.................................... 40
    Summary.................................... 57

III. FINDINGS.................................... 61
    Contextual Information About Study Sites.......... 61
        Job Placement Rates.................................... 61
        Labor Market Demand.................................... 63
        Metropolitan/Nonmetropolitan.................................... 64
        LEA Program Characteristics.................................... 64
    Analysis of Respondents.................................... 68
    Labor Market Factors.................................... 77
        Labor Market Conditions.................................... 77
    Community Factors.................................... 88
    Education Factors.................................... 92
        Philosophical Positions.................................... 92
        Program Planning.................................... 98
        Business/Industry Involvement.................................... 103
        Program Evaluation.................................... 111
        Counseling Processes.................................... 114
        Job Placement Processes.................................... 122
        Follow-up Processes.................................... 138
        Curriculum.................................... 143
        Instructional Processes.................................... 145
        Student Organizations.................................... 148
        Staff Characteristics.................................... 151

Student Characteristics.................... 158
Additional Analysis of Existing Data............ 162
Selected Variable Sets...................... 162
Education................................... 164
General Analysis............................ 166
Research Question 4......................... 166
Additional Results from the Analysis of Mail Questionnaires............................ 172
Regression Analysis......................... 172
Summary of Chapter III.......................... 180

IV. IMPRESSIONS, IMPLICATIONS AND SUGGESTIONS FOR ADDITIONAL RESEARCH............................ 191
Impressions..................................... 192
Implications.................................... 193
Suggestions for Additional Research............ 197

APPENDIX A STUDY CONSULTANTS.......................... 199
APPENDIX B MAIL QUESTIONNAIRES....................... 203
APPENDIX C DEFINITION OF SOCIO ECONOMIC VARIABLES FOR ANALYSIS OF EXISTING DATA............. 307
APPENDIX D SELECTED TABLES FROM THE ANALYSIS OF EXISTING DATA AND THE ANALYSIS OF MAIL QUESTIONNAIRES............................ 311
APPENDIX E REFERENCES AND BIBLIOGRAPHY............... 395

LIST OF TABLES

Table		Page
2.1	DATA DEFINITION FACT SHEET, PART 1	25
2.1	DATA DEFINITION FACT SHEET, PART 2	30
3.1	JOB PLACEMENT RATES OF THE PARTICIPATING LOCAL EDUCATION AGENCIES	61
3.3	DISTRIBUTION OF THE JOB PLACEMENT RATES FOR THE PARTICIPATING LOCAL EDUCATION AGENCIES	62
3.3	LABOR MARKET DEMAND FOR THE COMMUNITIES OF THE PARTICIPATING LOCAL EDUCATION AGENCIES	63
3.4	DESIGNATION BY TYPE OF COMMUNITIES OF THE PARTICIPATING LOCAL EDUCATION AGENCIES	64
3.5	SELECTED CHARACTERISTICS OF THE CASE STUDY SITES	65
3.6	DISTRIBUTION OF PARTICIPATING LOCAL EDUCATION AGENCIES AND RESPONDENTS BY TYPES OF SITES FOR THE MAIL QUESTIONNAIRE	69
3.7	PERCENT OF RESPONSES TO THE MAIL QUESTIONNAIRE SURVEY BY RESPONDENT TYPES	71
3.8	DISTRIBUTION OF INDIVIDUALS INTERVIEWED AT THE CASE STUDY SITES	72
3.9	DISTRIBUTION BY ETHNIC ORIGIN OF RESPONDENTS TO THE MAIL QUESTIONNAIRE SURVEY AT HIGH PLACEMENT SITES	74
3.10	PARENT'S LEVEL OF EDUCATION AS REPORTED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRES	75
3.11	PARENTS' OCCUPATIONAL STATUS AS REPORTED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRES	76
3.12	SELECTED LABOR MARKET INDICATORS FOR THE SIXTY-TWO COMMUNITIES IN THE MAIL SURVEY	78
3.13	SIGNIFICANT DIFFERENCES BETWEEN HIGH AND LOW PLACEMENT SITES FOR SELECTED SOCIOECONOMIC VARIABLES	80

3.14 SELECTED SOCIOECONOMIC INDICATORS FOR THE EIGHT CASE STUDY SITE COMMUNITIES 83

3.15 DISTRIBUTION OF SIZES OF FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE SURVEY 85

3.16 DISTRIBUTION OF TYPES OF FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE 86

3.17 PRESENCE OF UNIONS AT FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE 87

3.18 SELECTED EDUCATIONAL VARIABLES FOR THE COMMUNITIES OF THE SIXTY-TWO LEAs IN THE MAIL QUESTIONNAIRE AND CASE STUDIES 89

3.19 DISTRIBUTION OF EDUCATIONAL LEVELS BY SEX FOR THE POPULATION AT THE CASE STUDY SITES 91

3.20 RANKING OF THE GOALS FOR SECONDARY VOCATIONAL EDUCATION BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 97

3.21 FREQUENCY OF CONTACT BY THE SCHOOLS TO ASSESS SKILL NEEDS AS REPORTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNARIE SURVEY 100

3.22 FREQUENCY OF CONTACT BY SCHOOLS TO ASSESS SKILL NEEDS AS CONSIDERED OPTIONAL BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRES 102

3.23 VOCATIONAL EDUCATION DIRECTOR PERCEPTIONS OF WHO DETERMINES VOCATIONAL EDUCATION SKILLS TO BE TAUGHT AS REPORTED IN THE MAIL QUESTIONNAIRE 102

3.24 SEX AND ETHNIC ORIGIN OF ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 103

3.25 EDUCATIONAL LEVEL AND PRESENT OCCUPATIONS OF ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 104

3.26 NUMBER OF YEARS SERVED BY ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 105

3.27 PERCENTAGE OF PARTICIPATION IN ACTIVITIES REPORTED BY ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 106

3.28 FREQUENCY THAT TEACHERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE CONTACTED BUSINESSES REGARDING JOB PLACEMENT OF STUDENTS 107

3.29 FREQUENCY THAT JOB PLACEMENT SPECIALISTS WHO RESPONDED TO THE MAIL QUESTIONNAIRE CONTACTED BUSINESSES REGARDING JOB PLACEMENT OF STUDENTS 108

3.30 FREQUENCY THAT EMPLOYERS WHO RESONDED TO THE MAIL QUESTIONNAIRES REPORTED THEY WERE CONTACTED BY SCHOOLS REGARDING JOB PLACEMENT OF STUDENTS 109

3.31 FREQUENCY THAT EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRES REPORTED THEY HAD CONTACTED THE SCHOOLS REGARDING THE JOB PLACEMENT OF STUDENTS 109

3.32 FREQUENCY OF PARTICIPATION BY BUSINESSES IN ACTIVITIES AS REPORTED BY EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRES 110

3.33 FREQUENCY OF VOCATIONAL EDUCATION PROGRAM EVALUATION REPORTED BY VOCATIONAL EDUCATION DIRECTORS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 113

3.34 AMOUNT OF TIME SPENT CONDUCTING GUIDANCE AND COUNSELING ACTIVITIES AS REPORTED BY SCHOOL PERSONNEL RESPONDING TO THE MAIL QUESTIONNAIRE 117

3.35 LOCUS OF RESPONSIBILITY FOR ADMITTING STUDENTS TO VOCATIONAL EDUCATION PROGRAMS AS REPORTED BY DIRECTORS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 119

3.36 CONSIDERATIONS FOR ADMISSION TO VOCATIONAL EDUCATION PROGRAMS AS INDICATED BY TEACHERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 121

3.37 OPENING YEAR OF JOB PLACEMENT OFFICES AS REPORTED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE 124

3.38 TYPES OF JOB PLACEMENT SERVICES PROVIDED AS REPORTED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE 125

3.39 LOCUS AND AMOUNT OF RESPONSIBILITY FOR JOB PLACEMENT OF STUDENTS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 127

3.40 AMOUNT OF TIME SPENT IN JOB PLACEMENT ACTIVITIES AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRES 128

3.41 HOURS SPENT CONDUCTING SPECIFIC JOB PLACEMENT ACTIVITIES AS REPORTED BY VOCATIONAL EDUCATION TEACHERS RESPONDING TO THE MAIL QUESTIONNAIRE 129

3.42 RECIPIENTS OF JOB PLACEMENT SERVICES AS INDICATED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE 130

3.43 FACTORS THAT ARE "VERY MUCH HELP" FOR VOCATIONAL EDUCATION STUDENTS IN OBTAINING JOBS AS INDICATED BY RESPONDENTS TO THE MAIL QUESTIONNAIRES. 131

3.44 RANK ORDER OF FACTORS THAT ARE "VERY MUCH HELP" FOR VOCATIONAL EDUCATION STUDENTS IN OBTAINING A JOB AS INDICATED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 132

3.45 FACTORS CONSIDERED HAVING "VERY MUCH IMPORTANCE" FOR DECISION TO HIRE A PERSON FOR AN ENTRY-LEVEL JOB BY EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 133

3.46 FACTORS POSING "VERY MUCH DIFFICULTY" FOR VOCATIONAL EDUCATION GRADUATES OBTAINING JOBS AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 135

3.47 RANK ORDER OF FACTORS THAT POSE "VERY MUCH DIFFICULTY" WHEN VOCATIONAL EDUCATION GRADUATES ATTEMPT TO FIND JOBS AS PERCEIVED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 137

3.48 FREQUENCY THAT SCHOOLS FOLLOW UP JOB PERFORMANCE OF FORMER VOCATIONAL EDUCATION STUDENTS AS REPORTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE 140

3.49 FREQUENCY THAT SCHOOLS FOLLOW UP FORMER VOCATIONAL EDUCATION STUDENTS AS REPORTED BY VOCATIONAL EDUCATION DIRECTORS RESPONDING TO THE MAIL QUESTIONNAIRE 141

3.50 NUMBER OF HOURS SPENT CONDUCTING FOLLOW-UP OF FORMER STUDENTS AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE 142

3.51 FREQUENCY OF CURRICULUM REVISION AS REPORTED BY DIRECTORS RESPONDING TO THE MAIL QUESTIONNAIRE 143

3.52 MEMBERSHIP IN YOUTH ORGANIZATIONS AS REPORTED BY FORMER STUDENTS WHO RESPONDED TO THE MAIL QUESTIONNAIRE 149

3.53	FREQUENCY OF PARTICIPATION IN YOUTH ORGANIZATIONS AS REPORTED BY FORMER STUDENTS WHO RESPONDED TO THE MAIL QUESTIONNAIRE	150
3.54	DISTRIBUTION BY SEX OF SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	152
3.55	DISTRIBUTION BY AGE OF SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	153
3.56	HIGHEST LEVEL OF EDUCATION ATTAINED BY SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	155
3.57	NUMBER OF YEARS OF RELATED WORK EXPERIENCE OF SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	156
3.58	NUMBER OF YEARS HELD PRESENT JOB AS REPORTED BY SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	157
3.59	NUMBER OF YEARS SPENT TEACHING VOCATIONAL EDUCATION AS REPORTED BY SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE	158
3.60	SEX CHARACTERISTICS OF CURRENT AND FORMER STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRE	159
3.61	DISTRIBUTION OF GRADE POINT AVERAGE FOR ALL COURSES AS REPORTED BY STUDENTS REPONDING TO THE MAIL QUESTIONNAIRE	160
3.62	HOW A HIGH SCHOOL GRADUATE WITH TWO YEARS OF VOCATIONAL EDUCATION COMPARES WITH A WORKER WITH TWO YEARS OF WORK EXPERIENCE AND NO VOCATIONAL EDUCATION WHEN APLYING FOR THE SAME JOB AS INDICATED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRE	161
A.1	RECODED VARIABLES - LEA ANALYSIS	313
A.2	LEA - MEANS, STANDARD DEVIATIONS, AND VARIABLE CODES FOR RESEARCH QUESTION 1	314
A.3	LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1	317
A.4	LEA - MEANS, STANDARD DEVIATIONS AND VARIABLE CODES FOR RESEARCH QUESTION 2	322
A.5	LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 2	323

A.6 LEA - SOCIAL DEMOGRAPHIC DESCRIPTIONS 326

A.7 LEA - SOCIAL DEMOGRAPHIC VARIABLES - MEANS, STANDARD DEVIAIONS AND INTERCORRELATIONS 327

A.8 REDUCED MODEL: LEA SOCIAL DEMOGRAPHIC VARIABLES DEPENDENT VARIABLE - PLACE 329

A.9 EDUCATIONAL VARIABLE DESCRIPTION 330

A.10 LEA - EDUCATION VARIABLES - MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS 332

A.11 REDUCED MODEL: LEA - EDUCATION VARIABLES DEPENDENT VARIABLE PPLACE 333

A.12 LEA - GENERAL ANALYSIS OF SIGNIFICANT VARIABLES - MEANS, STANDARD DEVIATIONS, INTERCORRELATIONS 334

A.13 REDUCED MODEL: LEA - GENERAL ANALYSIS DEPENDENT VARIABLE PPLACE 335

A.14 LEA - VARIABLE DESCRIPTIONS AND VARIABLE CODES FOR ANALYSIS OF VARIANCE 336

A.15 LEA - MEANS AND STANDARD DEVIATION OF PERCENT OF PLACEMENT BY MAJOR INDUSTRIAL TYPE - MANUFACTURING AND METRO-RURAL LOCATION 337

A.16 LEA - ANALYSIS OF VARIANCE OF PERCENT OF RELATED VOCATIONAL EDUCATION PLACEMENT OF MAJOR INDUSTRY TYPE - MANUFACTURING AND METRO-RURAL LOCATION 338

A.17 SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (EMPLOYERS FROM 59 LEAs) 339

A.18 SIGNIFICANT CORRELATIONS ($\underline{P} <.05$) BETWEEN SELECTED VARIABLES AND TRAINING RELATED PLACEMENT RATE BY RESPONDENT GROUP (FORMER STUDENTS FROM 57 LEAs) 340

A.19 SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (VOCATIONAL EDUCATION TEACHERS FROM 62 LEAs) 342

A.20 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PRINCIPALS FROM 53 LEAs) 345

A.21 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PARENTS FROM 61 LEAs) 347

A.22 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (ADVISORY COUNCIL MEMBERS FROM 48 LEAs) 348

A.23 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (COUNSELORS FROM 58 LEAs) 350

A.24 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PLACEMENT SPECIALISTS FROM 19 LEAs) 353

A.25 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (CURRENT STUDENTS FROM 59 LEAs) 356

A.26 SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (DIRECTORS OF VOCATIONAL EDUCATION FROM 47 LEAs) 359

A.27 REGRESSION ANALYSIS BETWEEN THE 14 INDEPENDENT VARIABLES AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RELATED FIELD - RESPONDENT GROUPS - PARENTS 361

A.28 REGRESSION ANALYSIS BETWEEN THE 16 VARIABLES AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RELATED FIELD - FORMER STUDENTS 363

A.29 REGRESSION ANALYSIS BETWEEN THE 19 VARIABLES IN THE FULL MODEL AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RELATED FIELD 365

A.30 REGRESSION ANALYSIS BETWEEN THE 22 INDEPENDENT VARIABLES AND THE FULL MODEL AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RESPONDENTS - TEACHERS, COUNSELORS, SPECIALISTS 367

A.31 REGRESSION ANALYSIS BETWEEN THE 14 VARIABLES IN THE FULL MODEL AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RELATED FIELD - RESPONDENTS - ADVISORY COUNCIL MEMBERS 369

A.32 REGRESSION ANALYSIS BETWEEN THE 12 INDEPENDENT VARIABLES IN THE FULL MODEL AND THE DEPENDENT VARIABLE JOB PLACEMENT IN RELATED FIELD - RESPONDENT GROUP - DIRECTORS AND PRINCIPALS 371

A.33 REGRESSION ANALYSIS BETWEEN THE 15 INDEPENDENT VARIABLES IN THE FULL MODEL AND THE DEPENDENT VARIABLE JOB PLACEMENT - RESPONDENT GROUP - EMPLOYERS 373

A.34 REGRESSION ANALYSIS BETWEEN THE 14 INDEPENDENT VARIABLES IN THE REDUCED MODEL AND THE DEPENDENT VARIABLE PLACEMENT IN RELATED FIELD 375

A.35 SUMMARY OF MAJOR VARIABLES FROM THE REGRESSION ANALYSIS OF SELECTED INDIVIDUAL RESPONDENT GROUPS 377

A.36 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: TEACHERS, COUNSELORS, JOB PLACEMENT SPECIALISTS 378

A.37 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: DIRECTORS AND PRINCIPALS 379

A.38 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: CURRENT STUDENTS 380

A.39 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: FORMER STUDENTS 381

A.40 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: PARENTS 382

A.41 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: ADVISORY COUNCIL MEMBERS 383

A.42 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: EMPLOYER 384

A.43 DISCRIMINANT ANALYSIS OF SELECTED VARIABLES RESPONDENT GROUP: SELECTED GROUP VARIABLES 385

A.44 SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS 386

A.45 DISCRIMINANT FUNCTION RESULTS: VARIABLES APPEARING IN MORE THAN ONE RESPONDENT GROUP 391

LIST OF FIGURES

Figure		Page
1.1	HEURISTIC FRAMEWORK FOR FACTORS INFLUENCING JOB PLACEMENT	4
1.2	RELATIONSHIP BETWEEN ISSUE AREAS AND RESEARCH QUESTIONS	14
2.1	OVERVIEW OF STUDY	18
2.2	LABOR MARKET DEMAND CLASSIFICATION	21
2.3	LOCAL EDUCATION AGENCY SELECTION MATRIX	22
2.4	HEURISTIC FRAMEWORK DISPLAYING EXAMPLES OF FACTORS INFLUENCING JOB PLACEMENT	44
2.5	RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS	45
3.1	LEA - INTERACTION BETWEEN MANUFACTURING AS A MAJOR INDUSTRY AND METRO-RURAL LOCATION	167
3.2	SUMMARY - VARIABLES HAVING SIGNIFICANT RELATIONSHIP WITH PERCENT OF RELATED JOB PLACEMENT FOR SECONDARY VOCATIONAL EDUCATION STUDENTS	170

FOREWORD

Employment in a job related to training continues to be a widely accepted outcome of secondary vocational education programs. Even those persons who would view training-related job placement as a supplemental rather than a primary purpose of vocational education would not deny that job placement is an outcome which represents the expectations of many of those receiving, providing, and supporting vocational education.

Given the importance of job placement as an outcome for vocational education it is logical to assume that policy makers and decision makers at the federal, state, and local levels have great need for information which would allow them to optimize the allocation of limited resources toward the achievement of high rates of job placement for former vocational education students. This exploratory study attempts to identify factors influencing the placement of former secondary vocational education students in jobs related to their training. In addition to the identification of the factors, the study findings provide a description of the educational and community processes which appear to influence the placement of former secondary vocational education students in jobs related to their training.

From a methodological viewpoint this study should be of interest to vocational educators. This project represents one of the early efforts in vocational education for researchers to combine quantitative and qualitative approaches in a sizeable study to address a complex problem.

In addition to this report concerning secondary vocational education programs, the National Center will report the findings concerning factors influencing the job placement of postsecondary vocational-technical education students in January 1982. The inquiry concerning factors influencing job placement at the postsecondary level has included case studies of three community colleges and one vocational-technical school and the mailing of about 12,000 questionnaires to potential respondents in postsecondary institutions. The study was sponsored by the Office of Vocational and Adult Education, U.S. Department of Education.

Several distinguished individuals provided advice and assistance in planning and conducting the study. A list of these individuals can be found in the Appendix. The National Center is indebted to these individuals for their help.

The National Center is indebted to Dr. Kendrick Spooner, President, Center for Education and Management, Kersey, Colorado, for collecting and analyzing the existing data. With limited resources Dr. Spooner was able to provide the National Center with meaningful information from data not easily obtained or interpreted.

The National Center is grateful to the staff members who worked on the study. The project was conducted in the Evaluation and Policy Division under Dr. N. L. McCaslin, Associate Director. Dr. Floyd L. McKinney, Senior Research Specialist, served as Project Director. The project staff members were: Dr. Stephen J. Franchak, Senior Research Specialist; Dr. Ida Halasz-Salster, Research Specialist; Dr. Janet Spirer, Research Specialist; Dr. Pascal Forgione, Research Specialist; Joanne Farley, Irene Morrison, Mildred Quinn, and Patricia Fornash, Program Associates; and Douglas McElwain, Elizabeth Kendall, Carolyn Taylor, and Beth Harvey, Graduate Research Associates. Final editiorial review of this report was provided by the Editorial Services area of the National Center under the direction of Janet Kiplinger, Administrative Associate II.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

Factors Relating to the Job Placement of Former Secondary Vocational Education Students

Historically, vocational education has been evaluated on the basis of the number of former students placed in jobs related to the training they received. As policymakers and decision makers have attempted to achieve higher job placement rates they have been frustrated by a lack of information about those factors that seem to influence student job placement. This study attempted: (1) to identify factors relating positively or negatively to job placement, (2) to provide detailed descriptions of the educational and community processes appearing to influence job placement, and (3) to generate hypotheses concerning variables relating to job placement.

Data for the study came from a review of the literature, an analysis of existing data, case studies, and a mail questionnaire. The study was conducted in seven states. The analysis of existing data included data for all fifty states, and 586 local education agencies having five or more vocational education programs in the seven states. The case studies were conducted in eight local education agencies in the seven states. Mail questionnaires were received from 5,062 individuals representing ten respondent groups in sixty-two local education agencies in the seven states.

The study impressions should not be regarded as generalizations. At best they are working hypotheses, to be tested again and again in the ever-changing context in which vocational education programs operate. Based on the analysis of the qualitative and quantitative data it appears that higher job placement seems to exist in those schools where:

- Administrators, counselors, and teachers developed a clear understanding that the primary purpose of the vocational education programs in their school system was the placement of former students in jobs related to their training. In general, job related placement is not believed to be the primary purpose of secondary vocational education programs by educators, students, parents, or employers.

- Administrators, counselors, and teachers in a school system are consistent with each other concerning their belief that the purpose of vocational education is the placement of students in jobs related to their training.

- Principals are committed to the placement of former vocational education students in jobs related to their training program.

- There is a high level of staff enthusiasm for job placement.

- Student admission to vocational education programs is restricted to students with high interest and high potential

- Teachers are committed to the position that they have a great amount of responsibility for placing students in jobs related to their training.

- Cooperative vocational education programs actually place students in jobs related to their training programs.

- There is a high demand for workers in the surrounding labor market area. Labor market conditions over which vocational educators have no control are at least as important as the nature of vocational education itself in determining job placement.

- Manufacturing is a major industry in the community in which the school is located.

- There is a mix of industry sizes with proportionally less large industry in the area served by the school.

- The school is located in a community with proportionally more nonwhites in the population.

- Frequent use is made of needs assessment surveys for planning and evaluating vocational education programs.

- Teachers have regular contact with employers regarding the job placement of students.

- Students participate in youth organizations.

- The job placement office provides coordination and includes teachers in job placement activities.

- Students are provided training in job-readiness skills.

- The school staff resembles the racial balance of the community served.
- Students acquire the basic education skills needed to obtain a job and to perform on the job.
- Transportation jobs is available.
- The vocational education curriculum is oriented to the needs of employers.

An analysis of the general impressions juxtaposed with project staff knowledge of current situations in vocational education yielded the following implications. All of the implications deal with education factors over which vocational educators have some control. Labor market and community characteristics which are associated with high rates of job placement are beyond the control of vocational educators. Policymakers and decision makers who believe that placement in a job related to training is important may find the following implications helpful.

- School systems need to develop goals for the vocational education program that are internalized and made operational by all key actors.
- Graduate education programs designed to prepare and upgrade school principals need to emphasize the importance of the job placement goal for vocational education.
- School personnel need to understand the potential significance of the involvement of business and industry in planning, conducting, and evaluating vocational education programs.
- Teachers and administrators need to know how to actively involve community members in advisory committees.
- Teacher education programs and inservice education programs should be designed to impart to teachers an understanding of the vital role they play in job placement.
- Teacher reward systems should reflect the important role teachers have in job placement.

- Personnel policies and personnel development programs should reflect the importance of the vocational education teachers having recent on-the-job experience in the occupation related to the area in which they are teaching.

- If funding agencies believe job placement to be important, then job placement rates should be used in the formula to calculate the amount of an agency's entitlement.

- Criteria used to evaluate vocational education programs should be reflective of those processes that appear to influence the placement of former students in jobs related to their training. In addition to relevant job placement, program evaluations should be based on basic skill acquisition, continuation in school, and career exploration criteria.

- Teachers and administrators need knowledge of the ways to develop and maintain effective vocational education youth organizations.

- More effective and efficient means need to be developed to keep the vocational education curriculum updated.

- Program evaluation plans should include specific plans for dissemination and utilization of findings.

- The program planning and evaluation skills of vocational educators need to be upgraded.

- Personnel in the field of vocational education need to clarify the philosophical position and goals for vocational education at the secondary level.

- Planners, evaluators, and researchers need to make more extensive use of qualitative methods in research and evaluation efforts in vocational education.

- Graduate and inservice education programs designed for vocational education directors should create an understanding of the factors influencing the placement of former students in jobs related to their training.

- Vocational educators should offer graduate courses to provide their students with the theoretical and technical skills need to conduct inquiry using qualitative methods.

The factors enhancing the placement of former vocational education students in jobs related to their training are extremely complex and varied. The impressions and implications suggested in this summary should be helpful to policymakers and decision makers as they attempt to optimize minimal levels of resources. They should also lead to many critically needed research efforts to attain more definitive answers to pressing questions in vocational education.

CHAPTER I

PURPOSE AND OVERVIEW OF STUDY

In this chapter information is provided concerning the need for the study, the study goals and objectives, the conceptual framework developed for the study, major issue areas, and the study research questions.

Need

Historically, the placement of students in jobs related to training has been a criterion used in evaluating vocational education programs. Within the past few years, the issue of placing students in jobs related to their training has assumed paramount importance in vocational education. The increased attention devoted to this issue can be traced to three major sources. First, in 1976, P.L. 94-482, popularly known as the Education Amendments of 1976, was passed. A portion of this legislation mandated that each state systematically evaluate its vocational education programs and identified one evaluative criterion as the extent to which program completers and leavers find employment in occupations related to training. Second, a school-based job placement movement blossomed in the 1970s. While this movement has a lengthy history, its ultimate goal has been to make school-based job placement services available to all secondary and postsecondary students. Third, numerous sources have testified to the fact that this country is experiencing a chronic problem of youth unemployment. For example, the Carnegie Council (1979) reported that nearly fifty percent of all unemployment occurs among persons twenty-four years of age and younger and that some urban pockets of youth have unemployment rates of 60 percent. The problem is especially acute among female, minority, and lower socioeconomic class youth. Together, these three events have focused the attention of business, education, and government on the job placement of youth.

Traditionally, federal, state, and local education agencies have collected information through follow-up studies intended in part to identify the extent to which vocational education program completers find employment in occupations related to their training. One major problem with the information obtained through follow-up studies is that it does not adequately address the question of what factors and processes have an important influence on the job placement of former secondary vocational education students. Without information on the factors influencing the job placement process, vocational educators face difficulties in making recommendations to enhance the placement of students in jobs related to their training. If policymakers and decision makers are to optimize the use of resources, it is essential that they have information concerning those factors affecting the placement of former students in jobs for which they were trained.

Goals and Objectives

The overall goal of the study was to produce knowledge that can be used in determining policy and in making decisions to improve the job placement rates of vocational education programs. The objectives of the project were--

1. to identify factors relating positively or negatively to the placement of former secondary vocational education students in jobs related to their training;
2. to provide a detailed description of the educational and community processes that appear to influence former vocational education students being placed in jobs related to their training;
3. to generate hypotheses concerning variables relating to the placement of secondary vocational education students in jobs related to their training.

Dependent Variable

The dependent variable for the study was the percentage of former secondary vocational education students available for placement who were employed in a field related to their training.

Conceptual Framework

In this study the job placement rate provided by local education agencies was viewed as a measure of the ability of a vocational education program within a school to attain effectively the goal of placing students in jobs related to their training upon their leaving the vocational education program. This conceptualization of job placement focused the initial generation of issue areas and of research questions on vocational education program processes and school activities that are intended to achieve the outcome of job placement for students leaving the program. Priority was given to those processes and activities appearing to be links in explaining why vocational education as a distinctive educational treatment influences high or low job placement rates. In addition, the educational processes and activities are more powerful for policymakers and decision makers because they tend to be processes or activities that can be manipulated.

This conceptualization in and of itself does not provide clear direction as to what processes or activities are needed, required, or desirable to achieve high job placement rates. The conceptualization does suggest that different compositions of processes and activities in different contexts will result in variations in the outcome of training-related job placement.

Although emphasis in this conceptualization focuses on education factors, it was realized that other types of factors influence youth employment, e.g., labor market demand, minimum wage laws, etc. Therefore, two other types of factors, labor market factors and community factors, were included.

The framework was developed using information from a literature review and input from consultants. Several research reports, for example Robock (1978), noted that several factors contribute to youths' attaining jobs:

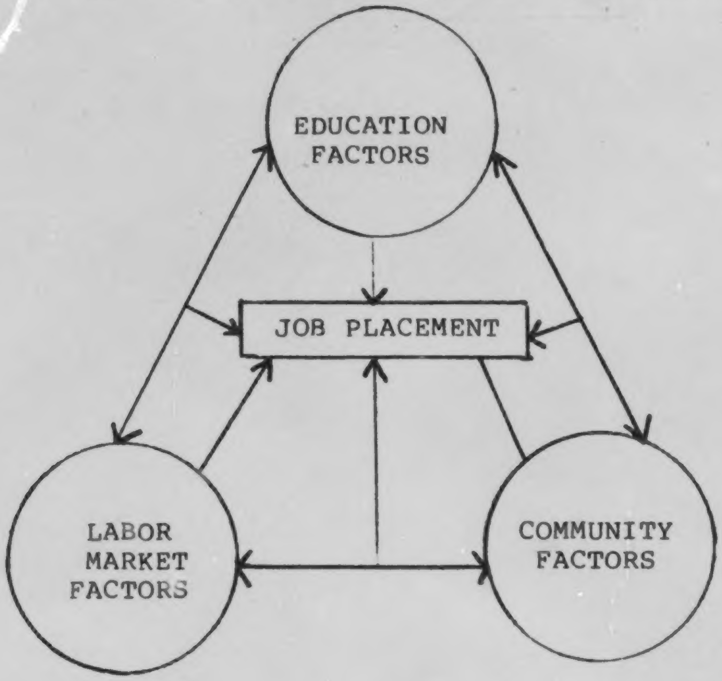
- Size and economic characteristics of the community
- Capabilities and policies of local employment service/job service offices
- Characteristics of the public school system
- Hiring practices of large and small employers in the community
- Role of community based organizations in economic and education affairs
- Patterns of cooperation among employers, labor unions, educational institutions, and local manpower agencies
- Community attitudes toward education and work

Education factors were stressed by a panel of consultants serving as an advisory group for the study. (See Appendix A for a listing of individuals serving as consultants to the study). The Evaluation Technical Advisory Panel members (see Appendix A) reviewed the study design and the conceptual framework. Many of their suggestions were used by the project staff.

The conceptual framework around which the study was organized is displayed in figure 1.1. The framework was intended to identify appropriate starting points for identifying and organizing possibly significant factors influencing job placement.

FIGURE 1.1

HEURISTIC FRAMEWORK
FOR FACTORS INFLUENCING JOB PLACEMENT



The framework suggests that in the transition from school to work three broad categories of factors have an impact on the obtainment of jobs by young people. These interacting categories are labeled education factors, local labor market factors, and community factors.

Issue Areas

Broad issue areas were identified by the project staff at the beginning of the study. These areas were derived from reviewing the literature, staff experience, and assistance from consultants representing a wide variety of backgrounds and experience. The issue areas further extended the framework (figure 1.1) and served as a basis for generating the research questions used in the quantitative aspects of the study and as a guide for staff members working with the qualitative parts of the study.

The initial issue areas identified were

A. Labor Market

  1. Employer profile
  2. Labor market demand
  3. Unionization
  4. Growth/decline of economy
  5. Occupational mix

B. Community

  1. Size
  2. Social mobility
  3. Racial composition
  4. Income level and distribution
  5. Political considerations
  6. Youth training programs
  7. Attitudes toward work education programs

C. Education

  1. Management and administration
  2. Policy and planning processes
  3. Resource allocation
  4. Program evaluation
  5. Needs assessment
  6. Personnel development
  7. Facilities and equipment
  8. Personnel qualifications
  9. Business/industry relationships
  10. Curriculum development
  11. Student organizations
  12. Cooperative work programs
  13. Student evaluation
  14. Job placement services
  15. Follow-up system
  16. Philosophical commitment
  17. Legislation

Research Questions

Using the framework displayed in figure 1.1, and the issue areas identified in the preceding section, specific research questions to be addressed in the study were generated. These questions were developed using project staff expertise, input from the advisory committee mentioned earlier, suggestions from the Evaluation Technical Advisory Panel, and advice from individual consultants.

The research questions that guided the phase of the study dealing with the analysis of existing data included the following.

1. To what extent will the following variables correlate with related job placement of former vocational education students:
    - a. Per capita income
    - b. Per capita income net shift
    - c. Average educational level
    - d. Racial composition of vocational education programs
    - e. Racial composition of population
    - f. Population net shift
    - g. Sex makeup of the population
    - h. Sex makeup of the vocational education program
    - i. Unemployment rate
    - j. Capital investment rate
    - k. Number of new industry/business graduates
    - l. Distribution of industry/business by size
    - m. Total highway mileage per square mile
    - n. Percent of change in enrollment in vocational education
    - o. Percent of cooperative education students
    - p. Average expenditure per student
    - q. Transitional services
    - r. Employment demand
    - s. Number of completers
    - t. Number of vocational training agencies
    - u. Number of vocational education programs
    - v. Sex makeup of work force
    - w. Age makeup of work force
    - x. Percent of students involved in vocational education youth organizations
    - y. Urban/rural setting
    - z. Major industrial type
    - aa. Dropout rate
    - bb. New housing starts

2. To what extent will the following correlate with related job placement of former vocational education students by U.S.O.E. code:
    - a. Rural/urban settings
    - b. Industrial diversification
    - c. Major industry type
    - d. Unemployment rate
    - e. Sex makeup of work force
    - f. Number of vocational education students in each U.S.O.E. two-digit code classification

3. To what extent will the following groups of variables explain variance in related job placement of former vocational education students:

   a. Variables vocational education can address that relate to job placement of former vocational education students
   b. Variables vocational education cannot address that relate to related job placement of former vocational education students
   c. Sociodemographic variables that relate to job placement of former vocational education graduates
   d. Economic variables that relate to job placement of former vocational education students
   e. Educational variables that relate to job placement of former vocational education students

4. To what extent do the following variable sets explain variance in related job placement of former vocational education students:

   a. Number of new industrial starts and percent of vocational education students in secondary schools
   b. Educational level and minority composition of population
   c. Major industry type and rural/urban setting
   d. Unemployment rate and minority composition of population

For the purposes of the mail questionnaire and the case studies the research questions were divided into two categories, descriptive questions and analytical questions. As the names of the categories imply, the descriptive questions call for a description of ongoing placement practices while the analytical questions focus on variables hypothetically influencing placement rates. The dependent variable associated with the questions was the ratio of the percent of vocational education students placed in training-related jobs to the percent of students available for placement. The descriptive research questions identified were as follows:

1. How many students obtained employment after leaving their vocational education programs?

2. How many students obtained employment in training-related jobs after leaving their vocational education programs?

3. What kinds of firms in the labor market areas surrounding the site schools hire former vocational education students?

4. How large are the firms that hire former vocational education students from the site schools?

5. Do employers of former vocational education students from site schools have labor unions present in their firms?

6. How many of the schools included in the study conduct assessments of employer skill needs?

7. What is the racial/ethnic background of parents of the vocational education students attending site schools?

8. What is the highest educational level attained by parents of the vocational education students attending site schools?

9. What are the occupations of parents of vocational education students attending site schools?

10. How often do the schools included in the study contact employers regarding the job placement of students?

11. How often do employers contact the schools included in the study regarding job openings for which former vocational education students might qualify?

12. In what ways do the local vocational education advisory committees assist the school vocational education programs?

13. Do employers participate in the site vocational education programs?

14. How often are the vocational education programs evaluated in the schools included in this study?

15. What are the perceptions of school personnel and employers regarding the comparison of former vocational education students to experienced workers in terms of employability?

16. What are the perceptions of school personnel regarding the comparison of vocational education students to nonvocational education students in terms of employability?

17. How do employers think workers trained in vocational education compare on the job to workers who have not received vocational education training?

18. What are the requirements for admission into the vocational education programs in the schools included in the study?

19. How effective is the school perceived to be by staff and vocational education students in providing various job placement services?

20. What are the professional responsibilities of school staff?

21. What types of job placement services are provided by the schools in the study?

22. How many of the schools in the study have formalized job placement offices?

23. What members of the school staff (e.g., teachers, counselors, etc.) participate in performing job placement activities?

24. How much work time is spent by school staff in performing job placement activities?

25. How many vocational education students utilize the job placement services in the schools in the study?

26. How many of the schools included in this study provide instruction in job-seeking and job-obtainment skills?

27. What person/agencies are perceived to be the most helpful to students in identifying job openings?

28. What person/agency should have primary responsibility for job placement as perceived by vocational education students and vocational education personnel?

29. What are the factors that are perceived to enhance the employability of former vocational education students?

30. What factors are perceived to present difficulties to former vocational education students' obtaining jobs?

31. What sources of information regarding job openings are perceived by school personnel and students as most helpful to vocational education students in finding jobs?

32. How frequently do the schools included in the study conduct follow-up studies of former students?

33. What is the rate of student participation in work-study or cooperative education programs in the schools in the study?

34. How often do vocational education teachers in the schools included in this study contact parents of vocational education students?

35. How much contact do parents of vocational education students attending site schools have with the vocational education programs?

36. What vocational education youth organizations are sponsored by the schools in the study?

37. What is the rate of participation in vocational education youth organizations among students enrolled in the schools in the study?

38. How many of the vocational education teachers in secondary schools hold certificates in their area of teaching?

39. What is the ratio of female to male students enrolled in the vocational education programs in the schools in the study?

40. What is the ratio of nonwhite to white students enrolled in the vocational education programs in the schools in the study?

41. What is the distribution of vocational education student grade point averages in the schools in the study?

42. What are the career plans of vocational education students enrolled in the schools in the study?

The analytical questions identified were as follows:

1. Is the use by schools of employer needs assessments associated with placement rates?

2. Is the presence (or absence) of unions in firms employing former vocational education students of site schools associated with job placement rates?

3. Is the frequency of evaluation of vocational education programs in the schools included in this study associated with the school's job placement rates?

4. Are there higher job placement rates at schools where the students give high ratings to their vocational education experiences?

5. Do schools that provide job placement services have higher job placement rates than schools that do not provide such services?

6. What types of job placement services are associated with high job placement rates?

7. Is the school's rate of student utilization of job placement services associated with job placement rates?

8. Is the amount of time spent by school staff on performing job placement activities associated with job placement rates?

9. Is the provision by schools of job-seeking and job-obtainment skills associated with school job placement?

10. Is the level of perceived effectiveness of schools in providing job placement services associated with job placement rates?

11. Is the school's rate of student participation in work-study/co-op programs associated with job placement rates?

12. Is student participation in work-study/co-op programs associated with student employment after leaving the program?

13. Is student participation in work study/co-op programs associated with student employment in training-related jobs upon leaving the program?

14. What is the relationship between participation in work study/co-op program and job placement by vocational education program areas?

15. Is the school rate of student participation in vocational education youth organizations associated with job placement rates?

16. Is participation in vocational education youth organizations associated with the student's employment?

17. Is student participation in vocational education youth organizations associated with student employment in training-related jobs?

18. How does enrollment in a particular vocational education program affect the relationship between student participation in vocational education youth organizations and employment in training-related jobs?

19. Is the average length of time spent teaching by the vocational education staff in schools associated with job placement rates?

20. Is the average length of time spent by the school's vocational education teachers in occupational areas related to their students' training areas associated with job placement rates?

21. Is the average length of time spent by a school's vocational education teachers in occupational areas not related to their training areas associated with their students' job placement rates?

22. Is percent of female enrollment in the school's vocational education programs associated with the school's job placement rates?

23. Is percent of male enrollment in the school's vocational education programs associated with the school's job placement rates?

24. Is percent of white enrollment in the school's vocational education programs associated with the school's job placement rates?

25. Is percent of nonwhite enrollment in the school's vocational education programs associated with the school's job placement rates?

26. Is performance in school, expressed by grade point average, associated with former student employment in jobs related to training?

The research questions guiding the analysis of existing data and the mail questionnaires evolved from the broad issue areas identified by the project staff. The issue areas also provided the organizing framework for conducting the case studies and for analyzing and writing the study findings. The information in figure 1.2 shows the relationship between the issue areas and research questions.

In the following chapter, information is presented about the methodology used in conducting the study.

FIGURE 1.2

RELATIONSHIP BETWEEN ISSUE AREAS AND RESEARCH QUESTIONS

	Research Questions[b]			Considered in Case Studies
	Existing Data	Mail Questionnaires		
Issue Areas		Descriptive	Analytical	
A. Community	3b, 3c			Yes
1. Size	1f, 1m, 1y			Yes
2. Social mobility				Yes
3. Sociodemographic characteristics[a]	1e,1a,4b,4d	7		Yes
4. Educational level of population[a]	1c, 4b,	8		Yes
5. Income level and distribution	1a, 1b			Yes
6. Political considerations				Yes
7. Attitudes towards work education programs		15,16,17,29		Yes
8. Youth training programs	1t			Yes
B. Labor Market	3b,3d	1,2		Yes
1. Labor force characteristics[a]	1v,1w,2e	9		Yes
2. Labor market demand	11,1r,2d,4d			Yes
3. Employer profile	2c	3,4		Yes
4. Occupational mix	11,1z,2b,4c			Yes
5. Unionization		5	2	Yes
6. Growth/decline of economy	1j,1bb,4a			Yes
C. Education	3a,3e	30		Yes
1. Management/administration				Yes
2. Policy/planning processes		6,12,13,18		Yes
3. Resource allocation	1p			Yes
4. Facilititas/equipment				Yes
5. Philosophical commitment[a]				Yes

FIGURE 1.2
(continued)

RELATIONSHIP BETWEEN ISSUE AREAS AND RESEARCH QUESTIONS

	Research Questions[b]			Considered in Case Studies
	Existing Data	Mail Questionnaires		
Issue Areas		Descriptive	Analytical	
(C. Education, continued)				
6. Legislation				Yes
7. VocEd program characteristics	1v,1n,2f,1d		18	Yes
8. Instructional processes				Yes
9. Cooperative work programs	1o	13,33	11,12,13,14	Yes
10. Curriculum development				Yes
11. Job placement services	1q	10,19,21,22,23 24,25,27,28,31	5,6,7,8, 10	Yes
12. Program evaluation		14	3	Yes
13. Needs assessment		6	1	Yes
14. Follow-up system		32		Yes
15. Staff characteristics		20,38	19,20,21	Yes
16. Personnel development				Yes
17. Student characteristics	1h,1s,1aa	39,40,41,42	22,24,25,26	Yes
18. Student organizations	1x	36,37	15,16,17	Yes
19. Student evaluation				Yes

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[a] Added after the initial development of issue areas. Initial list of issue areas is located on page 5.

[b] Listed on pages 7-13.

CHAPTER II

STUDY PROCEDURES

In this chapter the procedures used in conducting the study are described. Information is presented regarding the study approaches, sampling plan, analysis of existing data, case studies, and questionnaires.

Study Approaches

In order to provide the richest possible pool of information for analysis, the project staff used four different research approaches: a comprehensive literature review, an analysis of existing data, in-depth case studies, and a mail questionnaire. These study approaches were deliberately chosen in order to produce a mixture of qualitative and quantitative data. By combining qualitative data drawn from the case studies with the quantitative data available from the analysis of existing data and the mail questionnaire, the project staff was able to triangulate findings from the qualitative and quantitative approaches. An overview of the study is shown in figure 2.1.

Literature Review

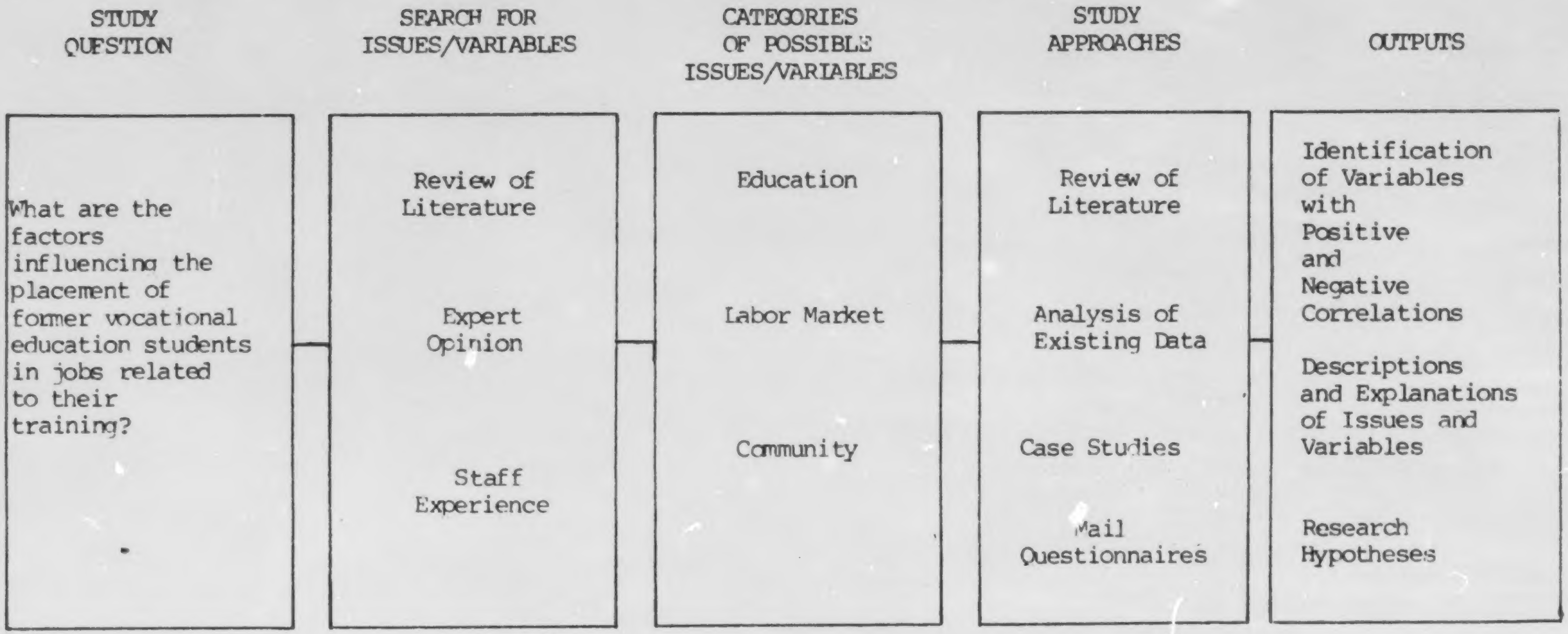
The literature review was conducted in order to fulfill three objectives. The objectives were--

1. to increase project staff awareness and familiarity with prior research in the area of training-related job placement for former vocational education students;
2. to identify existing information relevant to the project's research questions;
3. to assess where additional information is needed to extend or modify what is known about the job placement of former vocational education students.

In the literature review, little attention was given to the numerous annual former student follow-up studies conducted by state and local vocational education agencies. This decision was made because: (1) follow-up studies usually report statistics on placement rates of former students, but they do not provide much insight into the processes producing these rates, and (2) methodological and design differences between follow-up studies prevent the drawing of general conclusions regarding job placement (Copa 1980, Mertens et al. 1980). In addition, attempts to focus specifically on "training related" job placement proved almost

FIGURE 2.1

OVERVIEW OF STUDY


STUDY QUESTION
What are the factors influencing the placement of former vocational education students in jobs related to their training?
SEARCH FOR ISSUES/VARIABLES
Review of Literature
Expert Opinion
Staff Experience
CATEGORIES OF POSSIBLE ISSUES/VARIABLES
Education
Labor Market
Community
STUDY APPROACHES
Review of Literature
Analysis of Existing Data
Case Studies
Mail Questionnaires
OUTPUTS
Identification of Variables with Positive and Negative Correlations
Descriptions and Explanations of Issues and Variables
Research Hypotheses

fruitless. In the literature dealing with placement, the distinction between training-related and nontraining-related jobs was rarely made. McKinney, Gray, and Abram (1978) also pointed out that training-related placement is defined differently by researchers and by those providing the placement data, thus contributing to the problem of generalizability across studies.

Literature was obtained from a number of sources. Reports were sought from Research in Education (RIE), Abstracts of Instructional and Research Materials in Vocational Education (AIM/ARM), Resources in Vocational Education (RIVE), Current Index to Journals in Education (CIJE), Educational Research Information Center (ERIC), and Social Sciences Retrospective of the Ohio State University's Mechanized Information Center. Reports addressing the three categories of factors in the study conceptual framework (community characteristics, educational processes, and local labor market characteristics) were obtained and reviewed.

The other three parts of the study, the analysis of existing data, the case studies, and the mail questionnaires, were based upon one sampling plan. Prior to the discussion of the specific features of each of these major study components, the sampling procedures are presented.

The Sampling Plan

A nonprobability sampling design was used for the purposes of this study. The major disadvantage of this design is that no valid estimate of the risks of error can be obtained (Blalock 1979). However, because this is an exploratory study of which the main goal was to obtain valuable insights which ultimately may lead to testable hypotheses the nonprobability sampling design was deemed appropriate (Blalock 1979, Ackoff 1962, and Kish 1965).

The first stage of sampling involved the initial selection of states to participate in the study. Judgment sampling was used to select seven states to be included in the project. The criteria used in this selection process included--

a. the presence of an operating management information system in the state;

b. the willingness of states to participate in the study (one state contacted declined to participate);

c. a geographic distribution of states roughly approximating the major geographical regions of the United States; and

d. consideration of project constraints such as level of funds, staff, and time.

Based on these criteria, seven states were selected and subsequently agreed to participate in the study. All individuals contacted were promised confidentiality regarding the identification of the names of participating states, local education agencies, and responding individuals in all sites.

The second sampling stage involved the selection of local education agencies (LEAs) to serve as sites for the analysis of existing data and mail questionnaire parts of the study. LEAs offering secondary level vocational education programs in at least five different occupational fields (as defined by the six-digit USOE code number) were selected to participate. This criterion was based upon the definition of a vocational education school used in P.L. 94-482, Section 195. Out of a total of 1,476 local education agencies in the seven states, 586 fulfilled this criterion.

The 586 local education agencies were then stratified on the basis of three major variables each having two levels:

1. Average job placement rate of the LEA (high or low). By establishing a median split for the 586 job placement rates, it was determined that 54.3 percent and above would be "high" placement rates and below 54.3 percent would be "low" placement rates. The job placement rate was obtained from the individual state management information system records for the school year 1977-78.

2. Labor market demand (high or low). High labor market demand was defined as having unemployment rates of 5.9 percent and below. Low labor market demand was defined as having unemployment rates of 6.0 percent and above. These data were obtained from records of the U.S. Department of Labor and the respective labor statistics office in each state. The classification scheme, shown in figure 2.2, was adapted from the U.S. Department of Labor's classification system for labor supply.

3. Community type (metropolitan or nonmetropolitan). Metro was defined as located in a Standard Metropolitan Statistical Area (SMSA).

Nonmetro was defined as not located in an SMSA. This designation was based on information in the U.S. Bureau of the Census publication, County and City Data Book, 1977.

FIGURE 2.2

LABOR MARKET DEMAND CLASSIFICATION

Labor Market Demand Designation	Labor Supply Category	Description	Unemployment Rate *
High	Group A	Overall labor shortage	>1.5%
High	Group B	Low unemployment	1.5% to 2.9%
High	Group C	Moderate unemployment	3.0% to 5.9%
Low	Group D	Substantial unemployment	6.0% to 8.9%
Low	Group E	Substantial unemployment	9.0% to 11.9%
Low	Group F	Substantial unemployment	12.0% or more

SOURCE: U.S. Department of Labor, Area Trends in Employment and Unemployment. July-December, 1979, pp. 30-31.

* Ratio of unemployment to area's total labor force.

The cell structure of two levels of community type (metropolitan, nonmetropolitan), two levels of labor market demand (high, low), and two levels of job placement rate (high, low) resulted in a 2 x 2 x 2 design with 8 cells as shown in figure 2.3.

The stratification was done in order to ensure that communities of differing sizes having different labor market demands would be included in the study. In addition, stratification allowed the researchers to explore job placement in specific subdomains of the population of LEAs, for example, among those LEAs in metropolitan areas having low labor demand.

FIGURE 2.3

LOCAL EDUCATION AGENCY SELECTION MATRIX

METRO

LABOR MARKET DEMAND		High JPR	Low JPR
	High	9 LEAs	9 LEAs
	Low	9 LEAs	9 LEAs

NONMETRO

LABOR MARKET DEMAND		High JPR	Low JPR
	High	9 LEAs	9 LEAs
	Low	9 LEAs	9 LEAs

NOTE: JPR refers to LEA job placement rate.

The third stage of sampling involved the identification of sites for the questionnaire phase of the study. Seventy-two LEAs were randomly selected to serve as questionnaire sites. To ensure representation in all cells of the matrix, a requirement of randomly selecting nine LEAs per cell was made. Because of the constraints of time and money, the number of LEAs was limited to seventy-two. Ultimately, sixty-two of the seventy-two selected sites agreed to participate in the mail questionnaire phase of the study. The ten nonparticipating sites had orignally agreed to participate in the study, but then withdrew. When the ten sites withdrew, insufficient time remained in the study to select additional sites.

The fourth sampling stage consisted of selecting the individuals to receive the mail questionnaires. Based upon the review of the literature and meetings with external project consultants (see Appendix A for a list of consultants), ten groups of respondents were identified: local vocational education directors, principals of secondary schools, secondary vocational education teachers, guidance couselors, job placement specialists, local advisory committee members, local employers, current vocational education students, former vocational education students, and parents. In the analysis of the data, the parental respondent group was subdivided into fathers and mothers, making a total of eleven respondent groups. These respondent groups were chosen because each is directly involved in the job placement of vocational education students.

Because six of these groups were relatively small in size, all their members were included in the survey. These six groups were: vocational education directors, principals, teachers, counselors, job placement specialists, and advisory committee members. Due to the larger size of the remaining four groups (employers, current students, former students, and parents), random sampling was required. Current and former students were systematically sampled from enrollment lists provided by the LEA student accounting systems for the school years 1979-1980 and 1977-1978 respectively. The parents receiving questionnaires were randomly drawn from a pool formed by combining parents of both former and current students. The sample of employers was randomly selected from lists provided by the LEAs of employers who have been known to hire former vocational education students.

In order to obtain qualitative research information and to allow project staff to observe ongoing placement services at secondary schools, eight case studies were conducted. These case studies were conducted at the local education agency level. Six of the states participating in the project provided one case study site per state. One state had two case study sites. The case study sites were selected from the seventy-two sites previously chosen as mail questionnaire sites.

The selection of case study sites was judgmental. Four of the sites were classified as "high" placement rate sites (job placement rates of 54.3 percent or higher) and four were "low" placement sites (job placement rates below 54.3 percent). Some of the sites represented very large and complex secondary school systems, while others were in small districts with limited student enrollments. Two high and two low placement sites involved vocational-technical schools, while the remaining case study sites focused on comprehensive high schools.

Analysis of Existing Data

The analysis of existing data was undertaken as an ex-post-facto correlational analysis to provide an information base for identifying probable relationships between independent variables and related job placement. To focus this phase of the study four major questions were developed (see Chapter 1). The information in table 1 suggests relationships among the major questions, various independent variables, and vocational education secondary students' related job placement rates (dependent variable).

Each variable is defined in table 2.1, part 1, which provides the information necessary to operationally define each variable, and part 2, which provides the reader with the National Center staff's rating of the importance of each variable; the extent to which the variable can be controlled; the classification of the type of variable into labor market, community, or education; and the research questions related to the variable.

The limitations of the data are also included on the Data Definitions Fact Sheet (table 2.1). The major limitation for the labor market and community data is that the information is reported by county rather than by LEA. Definition and data collection techniques differ slightly for some variables among states; dropout rate, program cost, number and coding of vocational education programs and related employment are examples. The variable, guidance and job development services, may not be valid in the general analysis, due to inaccurate and imcomplete reporting of data by some LEA and state departments of education.

The following rules were used in recording this information:

1. For all LEAs, the LEA data were collected from county offices in the county where the LEA was located.

2. For area vocational schools serving high schools in more than one county, the average of the counties was recorded.

3. Unemployment rates were coded for LEAs and Area Vocational Schools (AVS) within a Labor Market Area (LMA) or Standard Statistical Metropolitan Area (SMSA) by the total labor market area.

4. AVS enrollment was defined to include all individuals enrolled in secondary schools served by the AVS. (The regional centers and cooperating districts for one state were handled in this manner.)

Each state handled the concept of an LEA a little differently; some sites are independent school districts while others are city, county, or area vocational school. The following is a brief description of how each state was organized. Three of the states have LEAs within counties and some area vocational schools that serve two or more LEAs. Three other states have LEAs primarily organized by county, with a few districts organized by incorporated city. In most cases, it appeared that the government corporate boundary and the school district boundary were similar, if not the same. One state has regional vocational centers that serve several LEAs; all centers were included in the sample.

TABLE 2.1

DATA DEFINITION FACT SHEET, PART I

VARIABLE NAME	ELEMENTS OF DATA TO BE COLLECTED	SOURCE OF DATA	YEAR DATA REPORTED	INCLUSION IN 584 LEAs	INCLUSION IN 57 States & Territories	LIMITATIONS AND OTHER COMMENTS
Vocational expenditures	Number of VE students by LEA. Total dollars spent on VE by LEA.	State Dept. of Education Accountability Report	1977-78 (except for one state 1976-77)	X	X	By LEA. One state by Regional Center. Not reported for one state.
Number of vocational education programs	Number of students each program, by USOE program codes, 01, 04, 07, 09, 14, 16 and 17 & totals	State Dept. of Education Enrollment Report	1977-78 (except for one state 1976-77)	X	X	By LEA. One state by Regional Center. Not reported for one state.
Guidance and Job Development services	If any transitional service is offered by an LEA, a yes will be recorded. If no services are identified, a no will be recorded.	State Dept. of Education Accountability Report	1977-78 (except for one state 1976-77)	X		As indicated by funds expended and reported to SEA by LEA. Incomplete data set.
Per capita income net shift	Per capita income 1974. Per capita income 1969. Percent average annual change.	City & County Data Book, 1977. Table 2	1969-1974	X	X	By county
Makeup of the work force	Percent of work force by male-female. Percent of work force by age groups 18-19 by sex.	Characteristics of the Population - Census. Table 121	1970	X	X	By county
Average educational level	Median school years completed.	Characteristics of the Population - Census. v. 1c	1970	X	X	County wide data

TABLE 2.1

DATA DEFINITION FACT SHEET, PART I
(continued)

VARIABLE NAME	ELEMENTS OF DATA TO BE COLLECTED	SOURCE OF DATA	YEAR DATA REPORTED	INCLUSION IN 584 LEAs	INCLUSION IN 57 States & Territories	LIMITATIONS AND OTHER COMMENTS
Level of industrial mix	Number of industries with 250 or more employees by county. Total number of industries by county.	*County Business Patterns* 1977. Tables 1E & 2.	1977	X		
Unemployment rate	Total work force unemployment rate, total unemployment rate by sex, age group, and race by county.	State Dept. of Labor or Industrial Relations State Reports	1977-78 (except for one state 1976-77)	X	X	By county by LMAs & SMAs for one state
Percentage change in school enrollment	Total number of enrollments (K-12) by race, sex, & total by LEA. Total number of VE enrollments by race, sex, & total. Total number of LEA (K-12) & VE for 1976.	Office of Civil Rights *Directory of [illegible]ntary & Secon[illegible] School Dists.* [illegible]6-77). *Education Directory Public School System* (NCES)	1976-77	X	X	Used all LEA with Voc Region for one state
Cooperative vocational education enrollment	Number of cooperative programs at LEA. Total number enrolled in VE at LEA.	State Dept. of Education	1977-78 (one state 1976-77)	X	X	Includes all Coop Programs (DOE, COE, CVOE plus for any service area)
Vocational youth organization	Number in each youth organization by LEA. Total number VE students in LEA.	State Dept. of Education	1977-78 (one state 1976-77)	X	X	Limited to that collected by SEA. Incomplete data set.

TABLE 2.1

DATA DEFINITION FACT SHEET, PART I
(continued)

VARIABLE NAME	ELEMENTS OF DATA TO BE COLLECTED	SOURCE OF DATA	YEAR DATA REPORTED	INCLUSION IN 584 LEAs	INCLUSION IN 57 States & Territories	LIMITATIONS AND OTHER COMMENTS
Population percent change	Population by city/county 1970. Population by city/county 1975.	County & City Data Book 1977. Table 2	1970 to 1975	X	X	By county
Population description by race	Population for 1970 with 1975 estimates by county/city (SMSA).	Characteristics of the Population - Census. v. 1, Table 35.	1970 census update	X	X	By county
Population description by sex	Population for males & females by county/city (SMSA).	Census-Characteristics of the Population - Census. v. 1, T-ble 35.	1970 census update	X	X	
Capital investment rate	Dollars spent	County & City Data Book 1977. Table 2	1977	X	X	For manufacturing industries only by county.
Industrial growth	Number of industries in 1977 by county. Number of industries in 1976 by county	County Business Patterns 1977.	1977	X	X	
Number of completers	Number of VE students enrolled by 2-digit OE code. Number of completers by 2-digit OE code.	State Educational Agency Follow-up & Completion Report	1977-78 (except for one state 1976-77)	X	X	

TABLE 2.1

DATA DEFINITION FACT SHEET, PART I
(continued)

VARIABLE NAME	ELEMENTS OF DATA TO BE COLLECTED	SOURCE OF DATA	YEAR DATA REPORTED	INCLUSION IN		LIMITATIONS AND OTHER COMMENTS
				584 LEAs	57 States & Territories	
Related Job Placement	Number of graduates placed by 2-digit OE code & total	State Educational Agency Follow-up & Completion Report	1977-78 (one state 1976-77)	X		Will not be able to get by USOE codes for some states.
Number of other VE programs	Number of other VE schools in city of LEA administrative office.	Directory of Post-secondary Schools with Occupational Programs (NCES)	1975-76	X		
Rural/metro	Dichotomy 1 = rural, 0 = metro	Designated or SMSA in census - 1970.	1970	X		These data were provided by the National Center
Labor demand	0 = low demand 1 = high demand	Employment Reports from each state	1977-78 (one state 1976-77)	X		These data were provided by the National Center
Vocational education placement	0 = low placement 1 = high placement	State Follow-up Studies	1977-78 (one state 1976-77)	X		These data were provided by the National Center
School enrollment	Number of students K-12	Office of Civil Rights Directory of Elementary & Secondary School Districts 1976-77.	1976-77	X		By LEA

TABLE 2.1

DATA DEFINITION FACT SHEET, PART 1
(continued)

VARIABLE NAME	ELEMENTS OF DATA TO BE COLLECTED	SOURCE OF DATA	YEAR DATA REPORTED	INCLUSION IN 584 LEAs	INCLUSION IN 57 States & Territories	LIMITATIONS AND OTHER COMMENTS
Highway miles	Square miles in county. Miles of highway in county.	State Highway Report	1977-78	X	X	By county
Dropout rate	Dropout rate 9-12 for district	State Depts. of Education	1977-78	X		One state includes grades 8-12. Incomplete data set.
New private housing units	Total number of new permits issued	County & City Data Book 1977. Table 2, Item 77.	1975-76	X		By county

TABLE 2.1

DATA DEFINITION FACT SHEET, PART 2

VARIABLE NAME	IMPORTANCE 1 = least 5 = most	EXTENT OF CONTROL BY VE		CLASSIFICATION			DEFINITION	RELATED TO RESEARCH QUESTION NUMBER(s)
		Could Control	No Control	Community	Labor Market	Education		
Vocational expenditures	3.3	X				X	Average dollar expenditures in LEA per student 1977-78. (Except one state 1976-77)	1p, 2a, 2e
Number of vocational education programs	3.2	X				X	The count of students in each 2-digit USOE program code area.	1u, 2a, 2e
Guidance and Job Development Services	4.2	X				X	Services offered to vocational students to facilitate job placement. (To include VE counselors, job development specialists, placement centers, & personnel.)	1q, 2a, 2e
Per capita income net shift	2.6		X		X		Per capita income for 1974 subtracted from per capita income for 1969.	1a, 1b, 2b, 2d
Makeup of the work force	2.5		X	X			Sex breakout & age breakout for work force by county/city.	1v, 1w, 2b, 2c, 3e
Average educational level	3.1		X	X			Number of years of school completed for populations.	1c, 2b, 2c, 4b

TABLE 2.1

DATA DEFINITION FACT SHEET, PART 2
(continued)

VARIABLE NAME	IMPORTANCE 1 = least 5 = most	EXTENT OF CONTROL BY VE		CLASSIFICATION			DEFINITION	RELATED TO RESEARCH QUESTION NUMBER(s)
		Could Control	No Control	Community	Labor Market	Education		
Level of industrial mix	3.2		X		X		Total number of industries divided by the number of industries with over 250 employees.	1e, 1z, 1b, 2d, 3b, 3c, 3r, 4c
Unemployment rate	3.9		X	X			The number of individuals unemployed, divided by total civilian labor force.	1l, 2b, 2c, 3d, 4d, 4e
Percentage change in school enrollment	2.9		X			X	Number of students enrolled in an approved VE program	1d, 1h, 2a, 2e, 3f, 4a
Cooperative VE enrollment	4.2	X				X	A VE program that is joint between the school & business where students receive on-the-job training & related classroom instruction	1o, 2a, 2e
Vocational youth organization	3.2	X				X	Curricular activity in support of VE programs	1x, 2a, 2e
Population percent change	3.3		X	X			Change in population in county/city over 5 years (1970-1975).	1f, 2b, 2c
Population description by race	2.7		X	X			Race is broken into white and others.	1e, 2b, 2c

TABLE 2.1

DATA DEFINITION FACT SHEET, PART 2
(continued)

VARIABLE NAME	IMPORTANCE 1 = least 5 = most	EXTENT OF CONTROL BY VE		CLASSIFICATION			DEFINITION	RELATED TO RESEARCH QUESTION NUMBER(s)
		Could Control	No Control	Community	Labor Market	Education		
Population description by sex	2.3		X	X			Gender of population (male or female).	1g, 2c
Capital investment rate	4.0		X		X		New capital spent for manufacturing	1j, 2b, 2d
Industrial growth	4.3		X		X		Includes industry new to the county in the year 1977.	1k, 2b, 2d, 4a
Number of completers	3.4	X				X	Those VE students finishing a VE program	1s, 2a, 2e
Related Job Placement	5.0	X				X	VE graduates obtaining employment in an occupation related to their VE instructional program.	all
Number of other VE programs	2.8	X				X	Schools offering training programs of less than a 4 year duration	1t, 2a, 2e
Rural/urban	3.6		X	X			SMSA designation	1y, 2b, 2c, 3a, 4c
Labor demand	4.2		X		X		Labor demand as reported by each state, split at means demand for each state.	1r, 2

TABLE 2.1

DATA DEFINITION FACT SHEET, PART 2
(continued)

VARIABLE NAME	IMPORTANCE 1 = least 5 = most	EXTENT OF CONTROL BY VE		CLASSIFICATION			DEFINITION	RELATED TO RESEARCH QUESTION NUMBER(S)
		Could Control	No Control	Community	Labor Market	Education		
Vocational education placement	5.0	X				X	Placement split at the mean placement for the state	all
School enrollment	1.9		X			X	Total enrollment K-12	1h, 2b, 2e
Highway miles	2.5		X	X			Miles of highway per square mile in county	1m, 2c
Dropout rate	4.0	X				X	Students leaving school prior to graduation	1aa, 2a, 2c
New private housing units	Not rated		X		X		Units authorized by building permits.	1bb, 2b, 2d, 4f

LEA data collection. The data for the study were collected primarily from government publications and state records. Most of the community and labor market data were obtained from Bureau of the Census reports. The information was reported by county.

The following is a list of publications used to collect the data.

State Education Directories, 1978-79.

State Farm Road Atlas. Chicago: Rand McNally & Company, 1964.

U.S. Bureau of the Census. Census of Population: 1970. Vol. 1, Characteristics of the Population. Washington, DC: Government Printing Office, 1973, Parts 2, 7, 11, 21, 24, 38, & 48. Tables 34, 120, & 121.

U.S. Bureau of the Census. County and City Data Book, 1977. Washington, DC: Government Printing Office, 1978.

U.S. Bureau of the Census. County Business Patterns 1977. Washington, DC: Government Printing Office, 1979.

U.S. Dept. of Health, Education, and Welfare. Directory of Elementary and Secondary School Districts, and Schools in Selected School Districts: School Year 1976-77. 2 Vols. Washington, DC: Government Printing Office, 1979.

U.S. Dept. of Health, Education, and Welfare. National Center for Education Statistics Directory of Postsecondary Schools with Occupational Programs 1975-76. Washington, DC: Government Printing Office, 1977.

U.S. Dept. of Health, Education, and Welfare. National Center for Education Statistics. Public School Systems 1977-78. Washington, DC: Government Printing Office, 1978.

The remainder of the data was collected from state reports and records. The states were contacted; needed data were identified; and arrangements were made for data collection. A project staff member visited each state's vocational education agency (except in the case of one state) and obtained data pertaining to highway miles, state unemployment rates, and vocational education information including items such as program costs, enrollments, completion rates, placement rates, and membership in youth organizations.

Data analysis procedures. In view of the research questions specified, multiple linear regression was selected as the method of analysis. The strategy for analysis was threefold. First, with related job placement as the criterion, three models, one for each of the three sets of variables (labor market, community, and education) were specified for the state and for the LEA samples. The models were of the form:

$$y = B_1 X_1 + \ldots\ldots + B_k X_k + B_0 + e$$

Three models were used in order to decrease the number of variables included in any one analysis. The project staff identified the variables that comprise each set or cluster of variables. These clusters split the variables into two groups: variables on which vocational education programs have little influence (labor market, community) and variables that vocational education programs do influence (education). (See table 2.1 for groupings.) Thus, for policy and decision making, variables that can be addressed by vocational education were handled separately.

A second analysis was performed with placement as the criterion and three sets of salient independent variables arising from the first analysis.

Procedurally, a modified backward elimination screening procedure was followed. Rather than eliminate on the basis of a statistical test alone, elimination took into consideration the statistical test, collinearity, and the relative importance of the variable. The project staff established the relative importance of each variable. Classical backward elimination weighs the importance for retention or elimination equally, whereas in this study the relative importance of variables for policy and decision making had been established, thus the modification. The variables eliminated were reported in light of their collinearity with others or their independence from related job placement.

Problems arise when using multiple linear regression. These take the form of nonlinear relationships, outliers, heteroscedasticity, and multicollinearity. To address each of these, a correlation analysis, a residual analysis, and a principal component analysis were performed.

Insight into nonlinear relationships, outliers, and heteroscedasticity can be obtained through residual analysis. Placements were regressed against each of the economic, sociodemographic, and educational variables. The residual plots were used to identify any departure from linearity, outliers, or heteroscedasticity. Variables were checked for face validity. Six of the original cases were deleted because of outliers or lack of validity of some of the data elements.

Unstable regression coefficients, "improper signs," and unstable standard errors can result from multicollinear independent variables. There was one case of change of sign identified in the LEA analysis, (percent of population white - PPOPWHI). To gain insight into the degree of collinearity, two analyses were performed. First, the intercorrelations among the independent variables were examined. Then, the ridge traces and a principal component analysis for each of the full models were examined. Based on the intercorrelations, ridge traces, and principal component analysis, collinear variables were eliminated. However, the elimination choices did consider the relative importance of each variable as established by the staff at the National Center.

A multiple regression analysis using backward elimination was performed on each group of variables and on all variables for the LEA data base. The principal component analysis of the independent variables was performed but not used for the following reasons.

1. The loadings were not as "clean" as desired.
2. The project staff provided other criteria for grouping variables. (Education, labor market and community classifications were used).
3. The project staff also identified the relative importance of each of the independent variables.

The three groupings and the ranked importance to structure the analysis were used.

The project staff recognized potential problems in interpreting ratio variables; therefore, where possible, the researcher examined the possible contamination by correlating the numerator and denominator of ratio variables. In those cases reviewed, in general, high correlations were found.

Development of additional variables. It was necessary to develop additional variables from the initial data. Data elements such as guidance and job development services, dropout rate, and membership in youth organizations were only partially collected. It should be noted that the variables, net shift in LEA enrollment from 1977 to 1978, and net shift of vocational education enrollment, 1977 to 1978, were computed rather than initially coded. The number of vocational education students enrolled who were of a race other than white non-Hispanic in 1977 and the number of nonwhite students enrolled in LEAs in 1977 were also computed. In the instance where there were missing values or the researcher was unsure about the value of the variables, the total case was omitted from the analysis.

Home economics was eliminated from much of the analysis because the consumer and homemaking programs that constitute a large part of its enrollment did not have placement data. Consequently, by adding this enrollment and completion information into the overall design, there would have been a substantial decrease in the total placement rate for each LEA. Statistics have been provided in other sections of the report that reflect the home economics programs.

Case Studies

The case studies were designed to obtain data in four ways: through open-ended interviews, observations, document reviews, and record reviews. Interviewing methods were based upon the elite (open-ended) technique developed by Dexter (1970). Within this framework, the interviewer sets the context of the interview and then allows the interviewees to respond in their own manner. During the interview each interviewee was treated in a way that stressed the interviewee's definition of the situation, encouraged the interviewee to structure the account of the situation, and allowed interviewees to individually introduce their own notions of what they regarded as relevant instead of relying upon the investigator's notion of relevance.

Prior to each case study, one project staff member interviewed appropriate personnel in the state department of education. During these visits, state officials were interviewed to obtain a state-level perspective about factors influencing job placement. In addition, relevant state documents and records were obtained. Examples of documents and records included the State Plan for Administering Vocational Education, reports of program evaluation studies, job placement studies, and the like. During this same trip, the project staff member briefed school officials at the case study site on the purposes and techniques of the study and scheduled interviews and observations for the first few days of the case study. This initial contact with the case study site provided an opportunity to obtain records and to collect documents. Examples of records and documents obtained at the local level included board of education policy manuals, advisory council minutes of meetings, Chamber of Commerce information about local business/industry, evaluation studies, and so forth. Project staff members reviewed the collected documents and records prior to the case study to acquaint themselves with the site.

Project staff members were usually on site for two weeks. During this time, approximately sixty to seventy interviews were conducted. Typically, interviewees represented teachers, counselors, job placement specialists, principals, administrators, employers, advisory council members, current students, former students, parents, and community personnel such as Chamber of

Commerce representatives and state employment office staff. Interviews usually lasted approximately forty-five minutes. Several individuals participated in second and occasionally third interviews. While interviews were scheduled to include representatives of the aforementioned groups, interviewers were encouraged, based upon the information they obtained from previous interviewees, to interview persons who seemed to possess "key" information about the job placement process at the site.

After each day's interviews, observations, and document reviews, the project staff members on site were able to discuss the interactions, solve any emerging problems, and plan the subsequent work. Modifications and adjustments of language, approach, and emerging issues were made on a consensual basis.

All the information collected in the case studies was coded using a coordinate index system. Organization of the data was two-tiered and was accomplished by assigning a series of codes to each data item. The first level of organization involved identifying data items by state, by source of information, by level of information (agency), and by type of interviewee or respondent. The second level of data organization was by issue area and specific questions within those issue areas. The data were typed and stored on index-type mechanically punched cards. The holes on the perimeter of the cards were coded and notched according to the codes assigned to the data placed on the card. This system allowed the retrieval of data on the basis of one or more criteria. Selection of a specific piece of information was achieved by inserting a needle in the appropriate hole(s) and shaking the deck so that the notched cards fell out.

On the final day at the case study site, team members met with local school officials to discuss with them the impressions they had gained from the case study. After returning to the National Center, an in-depth report was prepared using the coded information from the site. A summary of the report of the case study was shared with appropriate personnel at each case study site. Local school officials were asked to review the summaries and indicate to the project staff any inaccuracies or inadequacies of the report.

Data analysis procedures. Patton (1980) writes, "There are no formal, universal rules to follow in analyzing, interpreting, and evaluating qualitative data (p. 268)." Patton's definition of analysis and interpretation is helpful in understanding how the case study information was analyzed.

> Analysis is the process of bringing order to the data, organizing what is there into patterns, categories, and basic descriptive units. Interpretation involves attaching meaning and signifi-

> cance to the analysis, explaining descriptive patterns, and looking for relationships and linkages among descriptive dimensions (p.268).

The project staff has described the patterns that appear to be present in the data. Those patterns represent the perspective of the project staff members based on their interpretation of the data collected. As with any data, the readers will judge these perspectives in view of their own understanding of vocational education and the environment in which such programs operate.

The analysis of the case study information focused on the study problem and the initial issue areas presented in Chapter 1. The data collected from the interviews, observations, documents, and records were written or dictated by the project staff. As this initial write-up or dictation was being done, the data were organized according to the initial issue areas. The first step of analysis was the coding of the information. As the coding continued it became apparent that the initial listing of issue areas was incomplete. Additional issue areas were added, and some issue areas were combined or defined in slightly different ways. As project staff worked with the data, there was a continuing search for recurring regularities in the data. These regularities merged into patterns that could be assigned to homogeneous issue areas. The project staff maintained a keen awareness of the need to detect divergence in the data from high and low placement sites. It is important to note, once again, that the ways by which the data were categorized (issue areas) were always driven by the study problem.

Several staff members worked on the data analysis. This provided opportunitites for diversity of opinions to surface. The comparison and discussion of these differences frequently led to the emergence of important insights about the factors relating to job placement.

In this study the project staff was more interested in emerging descriptive patterns when the data from all sites was organized by issue areas, as opposed to a case study of the eight individual sites. Brief summaries of each site were prepared and shared with local site personnel. However, the promise of confidentiality to sites and individuals frequently limited the content and value of the individual site reports.

As the project staff analyzed the data there was a continuing search for relationships of factors (variables) and job placement. The determination of relationships was a time consuming process. The effort was accurately described by Patton (1980) as a process of

> ...constantly moving back and forth between the phenomenon of the program and our abstractions of that program, between the descriptions of what has occurred and our analysis of those descriptions, between complexity of reality and our simplifications of those complexities, between the circularities and inter-dependencies of human activity and our need for linear, ordered statements of cause-effect...(p. 268).

This frequently resulted in other possible findings being suggested and a determination being made to see if there were sufficient data to support the new suggestion. In addition, the data were verified by the checks and balances resulting from the combination of qualitative and quantitative data in the study.

Mail Questionnaire

The fourth data collection phase involved the use of mail questionnaires. Work on developing ten questionnaires (refer to Appendix B for copies of each questionnaire) was divided into four phases: (1) identification of variables to be incorporated into each questionnaire; (2) development of the format and specific questionnaire items; (3) pilot testing of the questionnaire; and (4) approval by the Federal Education Data Acquisition Committee (FEDAC) and the Committee on Evaluation and Information Systems of the Council of Chief State School Officers.

Instrument development. In phase one of the development of the instruments, project staff were involved in a number of activities concerned with identifying the major variables considered to be related to job placement. First, a review of literature was done. Second, a number of persons were asked to consult with project staff in identifying appropriate variables for consideration. For this activity, both formal and informal techniques were used. Informal techniques involved such activities as telephone conversations with state and local persons and analysis of information from meetings dealing with job placement and related areas. Formal techniques used included the conducting of a seminar focusing on variables relating to job placement, and gathering information from the Evaluation Technical Advisory Panel. The persons involved in both the informal and formal techniques included, but were not limited to, state and local vocational education administrators, vocational education practitioners (teachers, counselors, job placement specialists), vocational education researchers, economists, psychologists, sociologists, and employers. These persons brought both substantive and methodological knowledge for assisting in the definition of the information needs for the mail questionnaires. Moreover, the project staff informally interacted with individuals representative of the ten respondent groups to identify the kind of information that was feasible in a survey of this nature. The heuristic framework displayed in figure 1.1 was developed as a result of the above mentioned activities. The information in figure 2.4 shows a more detailed breakdown of the heuristic framework. Using the areas identified in figure 2.4, the project staff identified variables related to the issue areas and developed questionnaire items for the respondent groups. The relationship of questionnaire items to variables and issue areas is shown in figure 2.5. Copies of the questionnaires are located in Appendix B.

The second phase of the instrument development focused on the construction of the questionnaires. Project staff developed the format and questionnaire items of a first draft of each of the ten questionnaires and sent these to consultants for review. This process was repeated five times for the revision of the questionnaires before the final versions found in Appendix B were adopted. Consultants knowledgeable in instrument development and the subject matter areas (vocational education, job placement, career counseling, labor economics) critiqued the various versions of the questionnaires.

The major techniques used in determining face validity (Downie 1969) of questionnaires was the use of a group of judges knowledgeable in the areas of vocational education, labor economics, evaluation research, measurement theory; and thorough exploration of the available literature on factors affecting job placement such as job search, education, community, labor market, and so forth. The items were constructed to reflect the meaning associated with each dimension and subdimension of job placement in related fields of training. However, as stated by Carmines and Zellers (1980),

> ...in measuring most concepts in the social sciences it is impossible to sample content. Rather, one formulates a set of items that is intended to reflect the content of a given theoretical concept. Without a random sampling of content, however, it is impossible to insure the representativeness of the particular items (p. 22).

In content validity, as Cronbach and Meehl (1955) observe, the "acceptance of the universe of content as defining the variable to be measured is essential" (p.282). Further they add:

> However easy this may be to achieve with regard to reading and arithmetic tests it has proved to be exceedingly difficult with respect to measures of the more abstract phenomena that tend to characterize the social sciences (p.282).

Nunnally (1978) states that, "Inevitably content validity rests mainly on appeals to reason regarding the adequacy with which the content has been cast in the form of test items" (p. 93). In summary, in the development of the questionnaires the reviews of individuals' knowledgeable in the substantive areas was the primary method for addressing the validity of the questionnaires used in this study, along with the examination of information from the literature review.

The third phase of the instrument development process involved the pilot testing of the questionnaires. Questionnaires for each respondent group were piloted with less than nine individuals (federal government requirement) representative of each group. The results of the pilot test were used to revise the questionnaires and to assist in determining the time required to complete the questionnaires. Prior to adoption of the finalized questionnaires, reviews were made by nonproject staff from the National Center and a three person review team not associated with the National Center.

The fourth and final phase of the instrument development involved submitting the questionnaires to the Federal Education Data Acquisition Committee (FEDAC) for official government approval. Concurrently, the questionnaires were reviewed and approved by the Committee on Evaluation and Information Systems of the Council of Chief State School Officers. After the questionnaires were approved by FEDAC, they were considered ready for mailing to potential respondents.

Data collection. The first mailing of the questionnaire to respondent groups contained a cover letter, the questionnaire, and a stamped, self-addressed return envelope. A project staff member carefully monitored the questionnaire returns and checked off each respondent's individual code number. Four weeks later a second mailing was sent to the nonrespondents. This mailing contained a cover letter, the questionnaire, and a stamped, self-addresed return envelope.

Data handling and storage. Coding of variables such as occupation was done manually. One project staff member was assigned the task of coding occupations using the Dictionary of Occupational Titles coding scheme. Two-digit codes were used for this purpose. Interrater reliability checks were made by using other project staff members as coders and comparisons were made with sufficient evidence to support the reliability of the coding scheme.

Editing. Compilation of all data required a number of editing procedures. Occasionally, respondents would write in unrelated comments, which, upon a preliminary screening were eliminated from the data file. Fortunately, these were very few in number. A project staff member responsible for the preparation of the returned questionnaire for key punching visually examined the questionnaire to address concerns of reliability and validity of the data. Coding checks were made visually and keypunching from the questionnaire to computer cards was done. Another check was the keypunch verification. Another editing phase used to ensure the accuracy of the data was the development of a computer program used to identify any inaccurately punched data. The program was developed for editing purposes by checking the values on the computer tape to assure they were legitimate values. For example, when certain questions required a Likert scale rating of 1 to 5, the 5 legitimate codes of 1, 2, 3, 4, 5 were tested for by the editing program. Other codes such as 6, 8, 0, A, C, and so forth, would be noted on a printout and the proper correction would be made.

In summary, the editing procedures were included to address concerns for the reliability and validity of the data from the usable questionnaires.

Data storage and analysis procedures. The data were stored on computer tape to facilitate data analysis requirements. Every attempt was made to safeguard the loss of data and the confidentiality of the data set. This was addressed by limiting the work with the tapes to the computer project staff personnel. To safeguard the loss of the data, duplicate tapes were maintained along with punch card decks held in a restricted storage area.

The data analysis was conducted by the researchers using The Ohio State University's computer facilities. The primary system of computer programs used for the analysis of data was the Statistical Package for the Social Science (SPSS). This package is defined as a system which provides the user with a comprehensive set of procedures for data transformation and file manipulation, and offers a large number of statistical routines commonly used in the social sciences.

Arrangements for confidentiality of data. The project staff followed a number of procedures to insure confidentiality for respondents, and so that no unauthorized use was made of the collected information. Specifically, the following steps were taken to address this vital part of the study. First, the respondent's name did not appear on the data collection instrument. Rather, a separate code was assigned for the identification of the following pieces of information:

- State in which the respondent resides/works
- Questionnaire type (e.g., is respondent a vocational teacher, a former student, etc?)

FIGURE 2.4

HEURISTIC FRAMEWORK DISPLAYING EXAMPLES OF FACTORS INFLUENCING JOB PLACEMENT

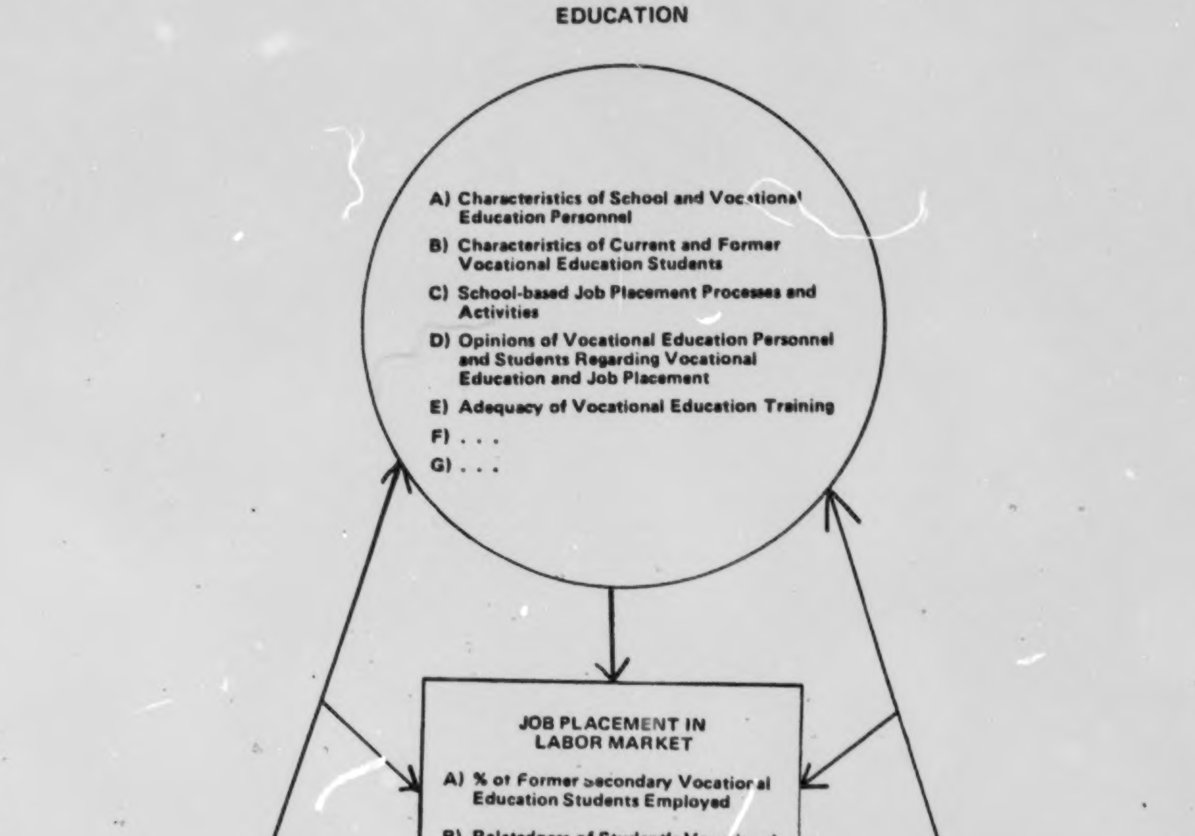

EDUCATION
A) Characteristics of School and Vocational Education Personnel
B) Characteristics of Current and Former Vocational Education Students
C) School-based Job Placement Processes and Activities
D) Opinions of Vocational Education Personnel and Students Regarding Vocational Education and Job Placement
E) Adequacy of Vocational Education Training
F) . . .
G) . . .
JOB PLACEMENT IN LABOR MARKET
A) % of Former Secondary Vocational Education Students Employed
B) Relatedness of Student's Vocational Education Training to Employment
LABOR MARKET
A) Number of Firms in Local Labor Market
B) Kinds of Firms in Local Labor Market
C) Size of Firms in Local Labor Market
D) Employer Attitudes toward Vocational Education and Vocational Education Students
E) Employer Interaction with Local Vocational Education Programs
F) . . .
G) . . .
COMMUNITY
A) Ethnic Composition of Community
B) Socio-economic Composition of Community
C) Community Attitudes (e.g., parents) toward Vocational Eduction and Job Placement
D) Business Involvement in Vocational Education and Job Placement
E) Input into Vocational Education from Local Vocational Education Advisory Committee
F) . . .
G) . . .

FIGURE 2.5

RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
I. Education		
A. CHARACTERISTICS OF SCHOOL AND EDUCATION PERSONNEL	1. Professional experience	P-15; SP-22; D-17;CN-18; T-24
	2. Related/nonrelated occupational experiences	P-15; SP-22; D-17;CN-18; T-24
	3. Professional responsibilities and certification	P-14; SP-21; D-16;CN-17; T-23
B. CHARACTERISTICS OF CURRENT AND FORMER VOCATIONAL EDUCATION STUDENTS	1. Vocational programs	FS-1,2; CS-1,2
	2. Student organizations	FS-3,4; CS-4,5
	3. School performance	FS-5,6; CS-6,7
	4. Career plan	FS-9; CS-10
	5. Work experiences before leaving school	FS-7,7A,7B,7C;CS-8,8A,8B 8C
	6. Students' employment experiences after leaving school	FS-12
	7. Use of job placement services	CS-3
C. SCHOOL-BASED JOB PLACEMENT PROCESSES AND ACTIVITIES	1. Contact and involvement:	
	a. Between school and labor market for job placement purpose	SP-6;Emp-1,2,3,5;CN-3,4; T-4,5,6
	b. Between school and labor market for related job placement purposes	Emp-4,6
	c. Between school and parents	PR-2;T-10
	2. Existence of job placement service	P-1
	3. Time and person working on job placement related activities	CN-1,2,3;T-2,3;SP-1,2,3, 5;D-1,2;P-2

FIGURE 2.5
(continued)
RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
I. Education (continued)		
C. SCHOOL-BASED JOB PLACEMENT PROCESSES AND ACTIVITIES	4. Students who received job placement services	P-3;T-1;SP-4
	5. Job placement instruction received	CS-9; FS-8
	6. Program evaluation and follow-up	D-3,5
	7. Vocational education program admissions requirements	T-7,8,9
	8. The most helpful person/agency for job placement	FS-11; CS-12
	9. Instruction in job seeking and job obtainment	SP-7,8
D. OPINIONS OF VOCATIONAL EDUCATION PERSONNEL AND STUDENTS REGARDING VOCATIONAL EDUCATION AND JOB PLACEMENT	1. Goals of vocational education: job placement as a part of goals	AdC-4; P-4; CN-5; T-11; SP-9; CS-13;FS-15; D-6
	2. Person/agency's responsibility for job placement	AdC-6; P-5; CN-8; T-14; SP-12; CS-15;FS-17; D-7
	3. Factors enhancing student's employability	AdC-7; P-6; CN-9; T-15; SP-13;CS-16;FS-18; D-8
	4. Difficulties for students employed	AdC-8; P-9; CN-12; T-18: SP-16; CS-17;FS-19;D-11
	5. Vocational education student vs. experienced worker in employability	AdC-9; P-7; CN-10; T-16; SP-14; CS-18;FS-20; D-9
	6. Vocational education student vs. nonvocational education student in employability	AdC-10; P-8;CN-11; T-17; SP-15; CS-19;FS-21;D-10
	7. Students' sources of employment information	CN-6; T-12; SP-10
	8. Effectiveness of job performance	SP-11; CN-7; T-13

FIGURE 2.5
(continued)
RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
I. Education (continued)		
D. OPINIONS OF VOCATIONAL EDUCATION PERSONNEL AND STUDENTS REGARDING VOCATIONAL EDUCATION AND JOB PLACEMENT	9. Importance of role of Advisory Committee in assisting Vocational Education programs	AdC-5
	10. Helpful information in obtaining jobs	FS-10; CS-11
	11. Important instruction for job placement	FS-16; CS-14
	12. Preparation for employment	Emp-10
E. ADEQUACY OF VOCATIONAL EDUCATION TRAINING	1. Adequacy of students' vocational education training to employment	Emp-10
II. LOCAL LABOR MARKET		
A. NUMBER OF FIRMS IN LOCAL LABOR MARKET	1. Number of firms	
B. KINDS OF FIRMS IN LOCAL LABOR MARKET	1. Type of business	Emp-16
C. SIZE OF FIRMS IN LOCAL LABOR MARKET	1. Size of business	Emp-17
D. EMPLOYER ATTITUDES TOWARD VOCATIONAL EDUCATION AND VOCATIONAL EDUCATION STUDENTS	1. Goals of vocational education: Job placement as a part of goals	Emp-6
	2. Person/agency's responsibility for job placement	Emp-7
	3. Factors enhancing students' employability	Emp-11

FIGURE 2.5
(continued)
RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
D. EMPLOYER ATTITUDES TOWARD VOCATIONAL EDUCATION AND VOCATIONAL EDUCATION STUDENTS	4. Difficulties for students employed	Emp-12
	5. Vocational education student vs. experienced worker in employability	Emp-13
	6. Vocational education student vs. nonvocational education students in employability	Emp-14
	7. Contact between school and labor market	Emp-8,9
	8. Comparison of vocationally-trained employees to nonvocationally trained employees	Emp-15
E. EMPLOYER INTERACTION WITH LOCAL VOCATIONAL EDUCATION PROGRAMS	1. Contact between school and labor market	Emp-1,2,3,4
	2. Participation in activities with vocational education programs	Emp-5
	3. Union connection	Emp-19
III. COMMUNITY		
A. ETHNIC COMPOSITION OF COMMUNITY	1. Race	P-12; SP-19; CS-22; FS-24; Emp-22; AdC-13; PR-13; D-14; CN-15;T-21
B. SOCIOECONOMIC COMPOSITION OF COMMUNITY	1. Educational level	P-13; SP-20; Emp-23; AdC-14; PR-13; D-15; CN-16; T-22

FIGURE 2.5
(continued)
RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
B. SOCIOECONOMIC COMPOSITION OF COMMUNITY	2. Educational level	AdC-15
	3. Students' SES	FS-25, 26; CS-23,24
	4. Age	P-10; SP-17; CS-20; FS-22; Emp-20; AdC-11; PR-11; D-12; CN-13;T-19
	5. Sex	P-11; SP-18; CS-21; FS-23; Emp-21; AdC-12; PR-12; D-13; CN-14;T-20
C. COMMUNITY ATTITUDES (e.g. PARENTS) TOWARD VOCATIONAL EDUCATION AND JOB PLACEMENT	1. Goals of vocational education: Job placement as a part of goals	PR-1
	2. Person/agency's responsibility for job placement	PR-3
	3. Factors enhancing students' employability	PR-4
	4. Difficulties for students employed	PR-5
	5. Vocational education student vs. experienced worker in employability	PR-6
	6. Vocational education student vs. nonvocational education students in employability	PR-7
	7. Quality of vocational education program	PR-8
	8. Rating of job placement service	PR-9
	9. Contact with school	PR-2
	10. Parental expectations	PR-10

FIGURE 2.5
(continued)
RELATIONSHIP OF HEURISTIC FRAMEWORK TO VARIABLES AND QUESTIONNAIRE ITEMS

HEURISTIC FRAMEWORK	VARIABLES	QUESTIONNAIRE AND ITEM NUMBER[a]
D. INPUT INTO VOCATIONAL EDUCATION FROM LOCAL VOCATIONAL EDUCATION ADVISORY COMMITTEE	1. Number of years serving on committee	AdC-1
	2. Type of assistance	AdC-2
	3. Frequency of meeting	AdC-3
	4. Evaluating the activities of the Local Vocational Education Advisory Committee	D-4
JOB PLACEMENT IN LABOR MARKET		
A. PERCENT OF FORMER SECONDARY VOCATIONAL EDUCATION STUDENTS EMPLOYED	1. Percent of former secondary vocational education students employed	Emp-18 (Primary source of this data was from states in this study)
B. RELATEDNESS OF STUDENTS' VOCATIONAL EDUCATION TRAINING TO EMPLOYMENT	1. Relatedness of student's vocational education training to employment	FS-13 (Primary source of this data was from states in this study)

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[a] Abbreviations used in identifying mail questionnaires (mail questionnaires are in Appendix B):

AdC - Advisory Council Member Questionnaire
CN - Guidance Counselor Questionnaire
CS - Current Vocational Education Student Questionnaire
D - Local Vocational Education Director Questionnaire
Emp - Employer Questionnaire
FS - Former Vocational Education Student Questionnaire
P - School Principal Questionnaire
PR - Parent Questionnaire
SP - Placement Specialist Questionnaire
T - Vocational Teacher Questionnaire

- Local education district in which respondent resides or works
- School in which respondent works or has participated in curricular activities
- Identification code of respondent for mailing purposes and follow-up mailing purposes

Second, safeguard procedures involved the processing of the data at the National Center by project staff members. For the third procedure, only one person was responsible for the maintenance of a master list of respondents' names and addresses. All master lists were destroyed following the completion of data collection. The fourth safeguard procedure involved the destroying or securing of all completed questionnaires upon completion of project and sponsor approval. Further, the conduct of this study did not consitute a system of records as defined under the Family Education Rights and Privacy Act (P.L. 93-380) and the Privacy Act (P.L. 93-579). There were no "sensitive" questions in the questionnaires. However, there was a section on "background information". These questions requested information from certain respondent groups on current and previous occupation, education obtainment, and work experiences. A number of previous studies relating to employment of youth reveal that background information is a significant factor. Moreover, these were considered essential items of background information to aid in assessing the contextual characteristics of study respondents' roles in the vocational program. Since no respondents' names nor their respective agency affiliation were reported, no respondents were forced to answer these questions if they did not desire to do so. Therefore, no confidentiality problems were presented by the inclusion of those items. Finally, the study complies with the Freedom of Information Act (P.L. 89-554) within the limits of confidentiality noted above. Data in aggregated form will be made available in accordance with the Freedom of Information Act.

Data analysis procedures. As discussed previously, the unit of analysis was the LEA. This was primarily determined by the fact that the individual LEAs could provide only an average for their respective LEA. Therefore, for each independent variable used in the analysis of the mail-survey questionnaire data set, a mean was calculated based upon the responses of the various groups comprising the sample of each LEA. The limitations of the use of aggregate data have been well-documented under the concept of "ecological fallacy". Robinson (1950) identified an important caution regarding the interpretation of individual-level variables based on the analyses of data aggregated by geographical or other units. Moreover, Borgatta and Jackson (1980) indicate that this leads many to the assumption that because use of aggregated data could be misleading at the individual level, every such interpretation of the analysis of aggregate data had to be incorrect. Further, they add that a tempered consideration be provided if certain statistical and logical considerations are undertaken. It becomes evident that while always suspect, aggregate data could suggest findings that exist at the individual level. In addition, they state that it requires a particular brand of reductionism to attribute some characteristics associated with geographical and other aggregation limits to individuals. In this project, the interpretation of this reductionism is approached by using the four study methods: review of literature, analysis of existing data bases, case studies, and mail questionnaires. Guided by these study objectives and the resulting research questions (refer to chapter 1) simple descriptive statistics were prepared for describing the characteristics of the respondent groups and the variables under study. Moreover, to show simple relationships between two variables a two-variable frequency table or cross-tabulation was developed. Initially, these tables were developed to provide a basis for testing or presenting assumptions about variable relationships.

Measures of association were used to analyze certain variables. Zero-order correlations were used to define the degree of relationship. Also, the scattergram technique was used to provide a definition of the relationship, as linear or curvilinear, along with the degree of association between the two variables.

To show the joint or cumulative affect of two or more explanatory variables on the dependent variable, rate of job placement in related field of training, multiple regression (MRA) and discrimnant analysis (DA) were used. These techniques were used as descriptive tools in an exploratory mode to provide definitions of (potential) hypotheses for future study on the separate and combined influence of the explanatory variables. Stepwise procedures were used in both the MRA and DA which contained only those independent variables that made a significant contribution to explaining the variable.

Multiple linear regression was selected as a method of analysis to identify the best sets of independent variables which could be used to explain the variance in the dependent variable, the rate of job placement in related field.

The multiple regression model focusing on the job placement in related field has the general form:

$$Y_1 = a + b_1y_1 + b_2x_2 \ldots\ldots b_mx_n + e$$

where Y is the dependent variable representing the percentage of former vocational education students who completed their vocational education program and were employed in a job related to their training (former students, class of 1977-78); x_1 through x_n are independent variables representing categories of variables including: (1) background information on the respondents, (2) information about the job placement process, (3) information about the instructional process, and (4) opinions about vocational education. See Appendix C for listing of the 335 variables used in the initial zero order correlation analysis.

In this regression analysis using a forward (stepwise) inclusion method, the independent variables were introduced into the equation only if they met certain statistical criteria. The order of inclusion was determined by the zero-order correlations with the dependent variables, the degree of association with the dependent variable determined in the analysis of the other data bases, and the importance of the educational variables relating to whether the school could influence or control the particular variable. The central determination of influence or control was made in consultation with various groups and by using information from the review of literature by the project staff. (Refer to Appendix A for a list of persons from which information was obtained.)

Separate regression analyses were done for the following respondent groups:

1. Directors and Principals (Administrative Staff)
2. Teachers, Counselors, and Job Placement Specialists (Faculty)
3. Current Students
4. Former Students
5. Parents
6. Vocational Education Advisory Council Members
7. Employers of Former Students

Discriminant analysis was used as a statistical technique for studying the differences between the high placement sites (thirty LEAs) and the low placement sites (thirty-two LEAs) with respect to several variables simultaneously. For the purposes of this exploratory study we attempted to determine how well certain variables discriminate between the high placement LEAs and low placement LEAs and which variables are the most powerful discriminators.

A discriminant analysis was used to differentiate between the high placement sites (30 LEAs) and the low placement sites (32 LEAs). The designation of high and low was based on the United States and individual state Departments of Labor, estimates of the 1978 annual average adjusted civilian labor force unemployment rate for the particular labor market area designation in which the LEA existed.

To distinguish between [illegible] and low placement sites, variables were classified under [illegible] market, community, and education categories. The iteration or data reduction techniques discussed earlier include a heuristic framework, a review of literature, discussions with a group of consultants familiar with the school to work transition, preliminary analysis of data using correlational techniques on existing data bases, and information obtained from the case studies. The analysis of those data provided the data basis for the design of the discriminant analysis study.

Klecka (1980) states that the mathematical objective of discriminant analysis is to weight and linearly combine the discriminating variables in some manner so that groups are forced to be as statistically distinct as possible. The major mathematical assumptions for the use of discriminant analysis are that discriminating variables have multivariate normal distribution and that they have equal variance-covariance matrices within each group. Moreover, the assumptions required of discriminant function analysis are similar to multiple regression.

One of the regression and discriminant analysis assumptions focuses on requirement for the absence of perfect multicollinearity. High multicollinearity .8 or larger, can create serious estimation problems because it produces large variances for the slope estimates and, consequently, large standard errors (Lewis-Beck, 1980). Zero-order correlations among all variables used in the discriminant and regression analyses were computed. Examination of the intercorrelations showed that they ranged from .46 to -.59 (current students); .45 to -.56 (directors and principals); .87 to -.35 (employers); .67 to -.38 (former students); .76 to -.27 (advisory council members); .64 to -.57 (teachers, counselors, job placement specialists); and .53 to -.39 (parents). Lewis-Beck (1980) indicate that while this approach is suggestive, a preferred approach is to regress each independent variable on all the other independent variables, and when any of the R^2 from the equation is near 1.0 there is high multicollinearity.

Where multicollinearity was extreme, the independent variables in question were examined for the relationship with the dependent variable, and in each case where the independent variable was the nonsignificant, correlation was excluded from the further analysis.

The standardized Beta represents the amount of units of the independent variable which is uniquely associated with the percentage of job placement in related field of training with effect of all of the other independent variables partialled out. Because the measurement units of various independent variables in a number of cases are not comparable, standardized or Beta coefficients were used. Moreover, Ezekiel and Fox (1967) state that for comparisons between problems where the standard deviations are much different, the Beta coefficient may have value.

The significance of the Beta was tested with an F statistic which should be generally at least four. Bowen and Weisberg (1980) state that this rule of thumb is actually very close for regressions with at least sixty cases. They add that if a coefficient is not significantly different from zero, then that variable can be safely dropped from the regression.

Multiple regression analysis is based on minimizing the sum of squares within any one group, whereas discriminant function analysis is based on minimizing the ratio of sum of squares between groups to sum of squares within groups. Klecka (1980) explains further the similarities and differences between multiple regressions and discriminant analysis. He states that if a research situation defines the group categories as dependent upon the discriminating variables, then that situation is analogous to multiple regression (Klecka, 1980). In discriminant analysis the groups are not defined as either the dependent or independent variable, and the same applies to the discriminating variables.

In Chapter 3, the presentation of discriminant analysis by respondent groups (1) teachers, job placement specialists, counselors, (2) directors, principals, (3) current students, (4) former students, (5) parents, (6) advisory council members, and (7) employers, attention focused on the contributions of the individual variables to describe the relative importance of a variable in determining the discriminant score. Because there is variation in the scaling of variables, the standardized coefficients were examined. Simply put, the magnitude was examined ignoring the sign, to determine the variables' absolute contribution in discriminating between the high and low placement sites. Another statistic to be presented will be the eigenvalue. Klecka (1980) states that the size of the eigenvalue is related to the discriminating power of that function, that is, the larger the eigenvalue the greater the discrimination. Another statistic to be presented is the canonical correlation, which is used in judging the substantive utility of the discriminant function. A high coefficient indicates that a strong relationship exists betwen the groups and discriminant function. If the high and low placement groups are not different on the variables being analyzed, then the correlation will be low, because we cannot create discrimination when none already existed. The fourth statistic is the overall Wilkes Lambda. Wilkes Lambda is a multivariate measure of group differences over the discriminating variables. The values of Lambda which are near zero denote high discrimination. The final measure to be presented is the classification function, in which the discriminating variables are used to predict the group to which a case most likely belongs. However, since we are only dealing with the high and low placement groups, we can expect 50 percent of the prediction to be correctly classified by chance alone. A proportional reduction in error statistic tau, Klecka (1980), will be used to give a standardized measure of improvement because of using only the two groups:

$$\text{tau} = \frac{n_c - \sum_{i=1}^{g} p_i n_i}{n. - \sum_{i=1}^{g} p_i n_i}$$

n_c = number of cases correctly classified.
p_i = prior probability of group membership.
$n.$ = total number of cases classified.

A number of assumptions are identified requiring the use of discriminant function analysis. Klecka (1980) identifies those in the narrative which follows:

- Two or more groups.
- At least two cases per group.
- Any number of discriminatory variables, provided that it is less than the total number of cases minus two discriminating variables measured at the interval level.
- No discriminating variable may be a linear combination of other discriminating variables.
- The covariance matrices for each group must be (approximately) equal, unless special formulas are used. Each group has been drawn from a population with a multivariate normal distribution on the discriminating variables.

Klecka states that the requirements for multivariate normal distribution on the discriminating variables and equal group covariance matrices are the most difficult assumptions to satisfy. However, he cites Lachenbruch (1975) as having shown that discriminant analysis is a rather robust technique which can tolerate some deviation from the multivarate distribution and equal group covariances assumptions.

In summary, findings of this analysis of the mail survey questionnaire data are reported as they pertain to the study objective--

- to provide a detailed description of the educational and community processes which appear to influence former vocational education students being placed in jobs related to their training.

The statistical data are presented in tables and are discussed in the next chapter only to the extent needed to interpret the meaning of the statistics used. Impressions, conclusions, and recommendations for further study are presented in a later section.

Summary

This study involved the use of four different research approaches: (1) a literature review, (2) an analysis of existing data, (3) case studies, and (4) mail questionnaire survey. These approaches were chosen in order to produce a mixture of qualitative and quantitative data. The use of multiple data sets provided an opportunity for data triangulation. Patterns which emerged from more than one of the data sets were presented to provide more reliable information.

The sets of quantitative and qualitative data used for the analysis were as follows:

1. Review of literature relevant to the placement of former secondary vocational education students in jobs related to their training.

2. Existing data for the same seven states and more specific information for 586 local education agencies in those states. Only local education agencies having five or more vocational education programs were included in the study. The data contained the most recent available labor market, community, and education information relevant to the study.

3. Case studies conducted by two researchers for two weeks at eight sites in seven states. Data were collected from documents, observations and in-depth interviews with administrators, vocational education teachers, job placement specialists, guidance counselors, employers, advisory council members, parents, current students, former students, and key community members.

4. Mail questionnaires received from 5,062 individuals at sixty-two sites in the same seven states. The respondents were vocational education directors, principals, vocational education teachers, job placement specialists, guidance counselors, employers, advisory council members, current and former students, mothers and fathers.

Factors appearing to relate to high or low job placement from each set of data were incorporated in the report. These sets of data initially were analyzed independently to identify factors relevant to the job placement of former secondary vocational education students. When cross-analyzed, the findings from the four data sets did not always concur. These discrepancies are indicated in the report.

For vocational education, this report represents a bold and somewhat nontraditional approach to data exploration and analysis. For the most part, vocational education researchers and evaluators have relied upon the rationalistic paradigm to provide the basis for the inquiry mode. In this study the data from the mail questionnaires and from the analysis of the existing data is representative of inquiry based on the rationalistic paradigm and the data collected in the case studies is representative of inquiry based on the naturalistic paradigm.

Numerous writers, including Pillemar and Light (1980) have noted that qualitative information enables the researcher to provide a "thickness" and richness of description which is nearly impossible to capture using only quantitative information. The case studies conducted as a part of this project have contributed to the depth of understanding of the factors relating to the placement of former students in jobs related to their training.

It was obvious from the framework guiding the study that the number of factors affecting job placement could be limitless. It was also readily apparent that vocational educators could have very limited to no control over most of the factors affecting job placement in the labor market. To focus effectively the synthesis of data, most of the effort was concentrated on factors the

National Center staff believed could be manipulated by vocational educators. The primary focus was upon the education treatment related to job placement. The focus for the data analysis was comparison of high job placement sites with low job placement sites. Minor data analysis was conducted by using the sampling stratification variables of labor market demand or community type. The following chapter presents the findings from the data collection using the four study approaches.

CHAPTER III

FINDINGS

In this chapter, information will be presented about the study sites, the respondents, and the findings concerning the relationship of labor market, community, and education factors to the placement of former secondary students in jobs related to their training.

Contextual Information About Study Sites

Sixty-two sites were represented in the mail questionnaire part of the study. Eight of the sites served in dual roles, first as case study sites and second as mail questionnaire sites. Procedures used to select the sites were described in chapter 2.

Job Placement Rates

The dependent variable for the study was the percentage of students who completed their vocational education in 1978, who were known to be available for work, and who were placed in full-time, training related jobs within six months of leaving the program. Data presented in table 3.1 indicate that there were thirty sites with reported high job placement rates and thirty-two sites with low job placement rates. Four of the eight case study sites reported high job placement rates while the other four reported low job placement rates.

TABLE 3.1

JOB PLACEMENT RATES OF
THE PARTICIPATING LOCAL EDUCATION AGENCIES (LEAs)

Placement Rates of LEAs [a]	Questionnaire Sites		Case Study Sites	
	Number	Percent	Number	Percent
Low	32	52	4	50
High	30	48	4	50
TOTALS	62	100	8	100

[a] The median placement rate for local education agencies was 54.3 percent. LEAs below 54.3 percent were classified as low placement sites and LEAs above 54.3 percent were classified as high placement sites. Placement rates were for 1977-1978. Placement rates were reported by state vocational education agencies.

There was considerable variation in the rate of job placement among the sites designated as either high or low placement sites. The rates for high placement sites ranged from 54.3 per cent to 97 percent, while the rates for low placement sites ranged from 7.9 percent to 52.8 percent. The placement rates reported for the sixty-two LEAs participating in the mail questionnaire survey are shown in table 3.2.

TABLE 3.2

DISTRIBUTION OF THE JOB PLACEMENT RATES FOR THE PARTICIPATING LOCAL EDUCATION AGENCIES

	Job Placement Rates of LEAs	Number of Questionnaire Sites	Number of Case Study Sites
Low Placement	0 - 10	1	0
	11 - 20	4	1
	21 - 30	0	0
	31 - 40	14	0
	41 - 54.2	13	3
High Placement	54.3 - 60	7	1
	61 - 70	10	1
	71 - 80	2	0
	81 - 90	7	1
	91 - 100	4	1
Totals		62	8

The data in table 3.2 indicate that there was a wide range and distribution of job placement rates represented in the study. One of the thirty-two low placement sites reported a job placement rate below 10 percent, four sites reported between 11 and 20 percent, fourteen reported between 31 and 40 percent and thirteen reported between 41 and 54.2 percent. Seven of the thirty high placement sites reported rates between 54.3 and 50 percent, ten reported between 61 and 70 percent, two reported between 71 and 80 percent, seven reported between 81 and 90 percent, and four reported between 91 and 100 percent. Eight of the sixty-two sites served as case study sites in addition to participating in the mail questionnaire. Among these, one low placement site reported a rate between 11 and 20 percent, and three reported job placement rates between 41 and 54.2 percent. One high job placement case study site represented each of the following categories of rates: 54.3 to 60 percent, 61 to 70 percent, 81 to 90 percent, and 91 to 100 percent.

Job placement rates in this study were reported by the vocational education agencies of the seven states participating in the study. From interviews with state agency personnel in the seven states, it appeared that methods for collecting and reporting job placement data differed somewhat, not only between states but also among sites within the states. The lack of a standardized and widely used methodology to collect job placement data must be considered a limitation of the study findings. Interviewees at the state agencies and at the sites believed, however, that they reported the best data available for the 1977-78 period.

Labor Market Demand

A second criterion for selection of LEAs was the level of labor market demand in the community where the site was located. High labor market demand was defined as an unemployment rate of 5.9 percent or below. At the time of site selection, the most recent unemployment rates were those published in 1978 by the U. S. Department of Labor. The data in table 3.3 show the labor market demand of the mail questionnaire and case study site communities in the study.

TABLE 3.3

LABOR MARKET DEMAND
FOR THE COMMUNITIES OF THE
PARTICIPATING LOCAL EDUCATION AGENCIES

Labor Market Demand[a]	Questionnaire Sites Number	Questionnaire Sites Percent	Case Study Sites Number	Case Study Sites Percent
Low[b]	32	52	3	37
High[c]	30	48	5	63
Totals	62	100	8	100

[a] Source, U. S. Department of Labor

[b] Low labor market demand was 6.0 percent and above unemployment, 1978 data

[c] High labor market demand was 5.9 percent and below unemployment, 1978 data.

The thirty high placement sites had unemployment rates of 5.9 percent. The remaining thirty-two sites in the communities with reported unemployment rates of 6.0 percent and above were designated as low labor market demand sites. In the questionnaire phase of the study, the number of sites located in communities with high labor demand (48 percent, was approximately the same as those with low labor demand (52 percent). There were more case study sites (63 percent) located in communitites with high labor market demand than in those with low labor market demand (37 percent).

Metropolitan/Nonmetropolitan

A third criterion for selection of the sites was their location in a metropolitan or nonmetropolitan community. While sincere attempts were made to locate sites that met all three selection criteria, fewer than the ideal number of sites were identified in nonmetropolitan communities. Metro communities were those located in a Standard Metropolitan Statistical Area (SMSA) while nonmetro communities were not located in a SMSA. The number of mail questionnaire and case study sites located in each type of community is shown in table 3.4.

TABLE 3.4

DESIGNATION BY TYPE OF COMMUNITIES OF THE PARTICIPATING LOCAL EDUCATION AGENCIES

	Questionnaire Sites		Case Study Sites	
Community type[a]	Number	Percent	Number	Percent
Metropolitan [b]	35	56	7	88
Nonmetropolitan [c]	27	44	1	12
Totals	62	100	8	100

[a] Source, U. S. Department of Commerce
[b] Communities classified as metropolitan were located in a Standard Metropolitan Statistical Area (SMSA).
[c] Communities classified as nonmetropolitan were not located in a SMSA.

As indicated in table 3.4, 56 percent of the questionnaire sites were located in metropolitan communities while 44 percent were in nonmetropolitan communities. Seven of the eight case study sites were located in metropolitan communities, with one in a nonmetropolitan community.

LEA program characteristics

The case studies provided descriptive information about the eight sites selected from among the total number (sixty-two sites) of mail questionnaire sites that participated in the study. The sites vocational education programs at the sites were the focus of the study, with emphasis upon the job placement function. The programs at the eight sites differed in a number of respects, including the delivery of secondary vocational education. The two systems of delivery found at the sites were the comprehensive high school and the regional vocational center. The enrollment, numbers of teachers, and programs at the eight case study sites are displayed in table 3.5.

TABLE 3.5

SELECTED CHARACTERISTICS OF THE CASE STUDY SITE

Type of Site	Site Number	Types of Delivery System	Grades	Total School Enrollment	Vocational Education Enrollment	Number of Teachers	Number of Voc.Ed. Teachers	Number of Voc.Ed. Programs	Cooperative Education Program
High Placement Site	1	Vocational Center	10-12	650	650	16	16	15	Yes
	2	Comprehensive HS	9-12	1600	N/A	110	N/A	5	Yes
	3	Regional Voc. Ctr.	10-11	572	572	21	21	20	No
	4	Comprehensive HS	9-12	315	128-180	N/A	5	5	Yes
Low Placement Site	5	Comprehensive HS	9-12	750	150-180	43	9	7	Yes
	6	Comprehensive HS	9-12						Yes
	7	Vocational Center	11-12	900-1000	900-1000	35	35	23	Yes
	8	Comprehensive HS	10-12	1,030	150	48	8	5	Yes

As the information in table 3.5 shows, the sites varied in size, numbers enrolled, and numbers of programs offered. While no descriptions of one or two sites are representative of all the case study sites or all the schools in the study, two sites are described briefly as examples. One example site had high job placement rates while the other had low job placement rates at the time of the study.

The site (Site #2) with a high job placement rate was a large comprehensive high school located in a growing metropolitan city. The city population of over 148,000 was 76 percent white. The relatively stable economy based on diversified industries and farming, had an unemployment rate of 4.8 percent.

Vocational education appeared to be a priority concern of the central school administrators. These administrators as well as the school-level administrators believed that job placement was enhanced by the high demand for workers and the high degree of interaction of the vocational educators with the employers in the community. At the high school the teachers of the five vocational education programs were held responsible for keeping abreast of changes in skills needed by business and industry. Interactions between the vocational education teachers and employers appeared to be regular and frequent. Teachers often visited the businesses/industries and requested employers to visit the school classes.

The placement office, which was separate from the guidance office, was not well known by the students. The placement coordinator, who also served another high school, primarily identified job openings and contacted employers. Since no follow-up studies were conducted, there was no information available about the compatibility of former students' placement in jobs related to their vocational education training. The placement coordinator sent the local employers a monthly bulletin describing the eligible job candidates at the two high schools.

There did not appear to be active recruiting for the vocational education programs aside from the annual open house held by the vocational education teachers. Several interviewees believed that low ability and minority students (30-35 percent of the school enrollment) were "dumped" into vocational programs. Apparently the admissions requirements varied among the different programs. For example, the electricity program required good grades and a good discipline record for admission, while the carpentry course admitted everyone due to the great demand in the community for carpenters.

The low placement site (Site #5) was a comprehensive high school located in a suburban community. The community had been a farming town until the last decade when professionals, primarily university and industry executives from neighboring cities, moved there for the "closed small town environment". The affluent population of 1,750 was 99 percent white Anglo-Saxon protestant.

The unemployment rate in this community was 5.4 percent, not exceptionally high or low in comparison to high placment sites in the study. Most interviewees felt that entry-level jobs were scarce in the nearby businesses and industries, resulting in unemployment for the recent high school graduates and persons wishing to reenter the labor market.

The high school had an enrollment of 750 students with forty-three teachers, two guidance counselors, a principal and an assistant principal. Nine of the teachers taught the seven vocational education programs (business education, home economics, building trades, auto mechanics, agriculture, graphic arts, and drafting) to 150-180 students. One of the vocational education teachers served part-time as the placement coordinator, but had very little time for contacting employers in the vicinity. The other teachers said they attempted to place students whenever possible but felt they did not have sufficient time to explore the limited placement opportunities in their community.

The prevailing attitude of interviewees towards vocational education appeared to be that "it should be available for those who can't go on to college". Many college-bound students, however, took vocational education courses such as auto mechanics for practical skills development. The curriculum was updated infrequently and did not appear to match the potential employment opportunities. For example, while there were very limited employment opportunities in agriculture in the community, vocational agriculture was still taught with the traditional curriculum. Several interviewees explained that other types of courses such as electronics would provide needed skills for the nearby growing industries.

Results of follow-ups were not used. According to the principal who pointed to a stack of computer printouts of follow-ups:

> We do follow-ups because the state mandates it. I don't know how to use these and it wouldn't really matter anyhow. People in this community don't want change.

There was not much apparent effort to recruit students into the vocational education programs. Ninth grade students received brochures describing the program and signed up on a "first come, first served" basis without much, if any, counseling about their options. While interviewees considered cooperative education a valuable transition between school and work, there were very few opportunities in the community for placement in a position related to the vocational education programs.

These descriptions of a high and a low placement site provided indicators of factors that appeared to enhance job placement. A number of these factors are explored in subsequent sections of this report. Analysis of the existing data from the 586 local education agencies indicated trends and statistical relationship among a number of variables. The analysis of existing data dispayed in tables A.2 and A.3 indicates that as the number of vocational education programs increases, the percent of placement increased. There was a positive relationship between the number of vocational education programs made available to students and the percent of placement rate. Growth in vocational education programs affected student placement negatively, and programs that provided guidance and job development services appeared to have a lower percent of placement. (The guidance and job development services variable may be invalid due to incomplete data set and unreliable data.)

Analysis of the existing data (tables A.2 - A.5) showed that all of the placement rates among service areas were significantly related. This indicates that schools with high placement rates in one program area tended to have higher placement rates in other program areas. As the number of programs in agriculture, distributive education, health, and trade & industrial/technical areas increased, the placement rate increased. It appears that agricultural programs had higher placement in rural areas and distributive education (D.E.) programs had higher placement in metropolitan areas. In addition, the unemployment rate related negatively to percent of placement for health occupations, home economics, business and office, and trades & industrial/technical programs.

It appeared (tables A.4 and A.5) that the unemployment rate and the extent of industrial mix did not affect placement in agriculture programs. The interrelationships among the various service area placement rates were moderate but low enough to indicate an independence among the program areas in how their placement rates were related to other independent variables. The unemployment rate appeared to affect both the placement rate and dropout rate significantly, in the same direction. As the unemployment rate rose, the percent of related placement and dropout rate both decreased. (The dropout rate related significantly to placement rates in all areas except health occupations.) This correlation between the dropout rate and placement rate indicates that the same economic conditions that aided placement of secondary vocational education students also enticed other youth, in about the same age groups, to leave school.

The percentage of students enrolled in youth organizations (tables A.4 and A.5) had moderately large correlations with the placement rates for all service areas. This indicates that as the percentage of members in youth organizations increased, the placement rate increased. Finally, the cost of vocational programs did not have a significant relationship to placement. It appears that more program money, by itself, make little difference in the placement rates.

Analysis of Respondents

The sampling plan for the mail questionnaire was designed to draw representative numbers of local education agencies and respondents from the eight types of mail questionnaire sites. Descriptions of the eight types of sites were provided in chapter 2. In the description of the sampling design an explanation is provided for selecting the local education agencies. Seventy-two local education agencies were identified initially for participation in the study. Replacements were not sought because of project, administrative, and time constraints. Ten LEAs were unable to provide the required information and were subsequently

TABLE 3.6
DISTRIBUTION OF PARTICIPATING
LOCAL EDUCATION AGENCIES AND RESPONDENTS
BY TYPES OF SITES FOR THE MAIL QUESTIONNAIRE

Type of Site	Number of Local Education Agencies	Number of Question-naires Mailed	Number of Respond-ents	Percent Respond-ing	Percent of Total Respond-ents
High placement, high labor demand, metropolitan	9	3,231	882	27.3	17.4
High placement, high labor demand, nonmetropolitan	6	730	232	31.8	4.6
High placement, low labor demand, metropolitan	9	1,926	485	25.2	9.6
High placement, low labor demand, nonmetropolitan	6	1,224	412	33.6	8.1
Low placement, high labor demand, metropolitan	8	1,474	509	34.5	10.1
Low placement, high labor demand, nonmetropolitan	7	1,236	292	23.6	5.8
Low placement, low labor demand, metropolitan	9	8,875	1,853	20.9	36.6
Low placement, low labor demand, nonmetropolitan	8	1,611	397	24.6	7.8
Totals	62	20,307	5,062	24.9	100

excluded from the study. The information in table 3.6 shows the number of local education agencies that participated in the study and the number of individuals from these sites who responded to the questionnaires.

It is apparent from the information in table 3.6 that over a third (36.6 percent) of the respondents were from low job placement sites located in metropolitan communities with high rates of unemployment. Forty-four percent of the questionnaires were sent to individuals in sites with low job placement and low labor demand. The highest average rate of returns (35 percent) was made by respondents from low placement/high labor demand/metropolitan sites. Respondents from low placement/low labor demand/metropolitan sites had the lowest average percent return rate (21 percent) of the eight types of sites.

Questionnaires were mailed to a total of 20,307 individuals at the sixty-two participating sites. The data in table 3.7 show the numbers returned by the ten respondent groups (mothers and fathers combined).

As indicated by the data in the table 3.7, an average of 25 percent of all the individuals responded to the mail questionnaires. The directors of vocational education programs had the highest response rate with 93 percent returning their questionnaires. Since questionnaires were sent to both mothers and fathers of current and former students, almost half (47 percent) of the questionnaires were sent to parents. While 28 percent of the total number of respondents were parents, only 15 percent of the questionnaires mailed to parents were returned.

School staff members (vocational education directors, principals, vocational education teachers, guidance counselors, and job placement specialists) were more likely to respond (65 percent) than others who received questionnaires. Advisory council members were more willing to participate (45 percent) than respondents identified as employers who returned 38 percent of the questionnaires.

At the case study sites, individuals were selected for interviews primarily through the cooperation of the state and local education agency liaison persons. Additional interviews were conducted when project staff interviewers identified key individuals in the local education agencies and in the communities.

The number of interviews conducted by the project staff at the case study sites is shown in table 3.8.

TABLE 3.7

PERCENT OF RESPONSES TO THE MAIL QUESTIONNAIRE SURVEY BY RESPONDENT TYPES

Respondents	Number of questionnaires mailed	Proportion Group/ Total	Number of questionnaires Returned	Proportion Group/ Total	Percent of Returns
Vocational Education Directors	54	.0026	50	.0099	93
Principals	222	.0109	158	.0312	71
Vocational Education Teachers	2,337	.1151	1,072	.2118	46
Guidance Counselors	651	.0321	343	.0678	53
Job Placement Specialists	80	.0039	51	.0101	64
Advisory Council Members	624	.0307	282	.0557	45
Employers	1,528	.0753	588	.1162	38
Current Students	2,620	.1290	659	.1301	25
Former Students	2,561	.1261	449	.0887	18
Parents	9,629	.4743	1,410	.2785	15
Totals	20,306	1.000	5,062	1.00	25

TABLE 3.8
DISTRIBUTION OF INDIVIDUALS INTERVIEWED AT THE CASE STUDY SITES

Site Number	Type of Site	Total Individuals	State Level Individuals	Local School Staff	Local Students and Parents	Local Employers and Community Members
1	High placement/low labor demand/ metropolitan	58	7	18	17	16
2	High placement/high labor demand/ metropolitan	50	6	18	15	11
3	High placement/high labor demand/ metropolitan	57	8	22	15	12
4	High placement/high labor demand/ nonmetropolitan	40	6	12	12	10
5	Low placement/high labor demand/ metropolitan	47	11	13	9	14
6	Low placement/low labor demand/ metropolitan	72	11	23	18	20
7	Low placement/low labor demand/ metropolitan	67	7	20	25	15
8	Low placement/high labor demand/ metropolitan	47	11	12	13	22
	Totals	438	67	138	124	120

Information in table 3.8 shows that a total of sixty-seven individuals were interviewed at the state departments of education and 382 at local education agencies. Interviewees at the local level included school staff members, current/former students, parents, employers, and community members.

As shown in table 3.9, four-fifths (81 percent) of the total number of respondents to the mail questionnaires indicated their ethnic origin as white. Nearly 10 percent categorized themselves as black, while the remaining ten percent either indicated American Indian, Asian, Hispanic, "other", or did not respond to the question.

Statistical analysis of the ethnic origin of the population in the questionnaire site communities was not possible due to the selective sampling based upon involvement with the vocational education program. More school personnel indicated themselves as minorities at high placement sites than at low placement sites. There were greater percentages of white directors, principals, teachers, counselors, job placement specialists, and employers at the low placement sites than at high placement sites. On the other hand, a greater percentage of advisory committee members, parents and students were white at the high placement sites than at the low placement sites.

More parents (19 percent) responded from high placement sites than from low placement sites (14 percent). Responses from parents were analyzed separately when notable differences appeared in their responses. Note in table 3.9 that 13 percent of mothers at both high and low placement sites were black, while 8 and 5 percent of fathers were black at the respective sites. Similarly, 77 and 75 percent of the mothers were white at high placement sites, while 84 and 82 percent of the fathers were white.

The educational levels of the mothers and fathers, on the other hand, were less similar to each other. The information in table 3.10 displays the parents' levels of education as reported by responding current and former students.

TABLE 3.9

DISTRIBUTION BY ETHNIC ORIGIN OF RESPONDENTS TO THE MAIL QUESTIONNAIRE AT HIGH PLACEMENT SITES

Type of Respondent	Number of Respondents		Percent of Respondents by ethnic origin													
			American Indian		Asian		Black		Hispanic		White		Other		No Response	
	HP	LP	HP	LP	HP	LP	HP	LP	HP	LP	HP	LP	HP	LP	HP	LP
Director	25	25	4	4	0	0	4	0	4	0	84	96	0	0	4	0
Principal	90	68	2	0	0	0	13	6	2	0	79	93	1	0	2	2
Teacher	375	697	2	1	.3	.4	13	8	2	.6	81	87	.5	1	2	2
Counselor	103	240	2	0	0	0	12	10	2	0	77	84	2	0	4	6
Placement Specialist	2	49	0	2	0	2	0	10	0	0	100	71	0	2	0	12
Advisory Committee	119	163	.8	.6	0	0	10	3	0	0	87	91	.8	.6	.8	3
Employer	231	357	1	2	1	.6	[illegible]	3	0	0	84	83	2	2	9	8
Current Student	273	386	3	2	.4	.5	14	19	.4	2	78	72	2	1	2	4
Former Student	184	265	2	1	0	4	10	9	.5	.8	82	81	.5	.3	6	6
Mother	350	484	2	2	0	4	12	13	.6	.6	77	75	4	4	4	5
Father	259	317	5	3	0	6	5	8	.4	.2	84	82	2	4	4	2
TOTALS	2011	3051	2	2	.2	.4	10	10	1	1	81	81	2	2	4	4

TABLE 3.10

PARENTS' LEVEL OF EDUCATION AS REPORTED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRES

Level of Education	Percent of Parents by Type of Site			
	High Placement Site[a]		Low Placement Site [b]	
	Mother	Father	Mother	Father
> 7 years	3	10	2	4
7-9 years	13	13	6	9
10-11 years	16	14	13	11
High School Grad.	44	33	49	37
1-3 years college	13	13	15	16
4 years college	4	5	4	6
< 4 years college	3	4	5	6
No Response	5	9	7	11
Totals [c]	101	101	101	100

[a] N = 457 current and former students' responses
[b] N = 651 current and former students' responses
[c] Total does not equal 100 percent due to rounding.

As noted by Breton (1972), parental employment activities and educational level influence the career decisions of youth. Interviewees at the case study site frequently mentioned that, as one employer pointed out, "parents influence their children as to which vocational education class they should take." At a case study site a counselor stated that:

> The most important factor of the placement of students is the socioeconomic status of the parents. The higher the socioeconomic status ofthe parent, the less likely the student is to enter vocational education, and placement is thus affected.

Both mothers and fathers from low placement sites had a higher level of education than parents at high placement sites. The exception to this trend was at the "high school graduate" level of education. Students indicated that a greater percentage of mothers than fathers at both high and low placement sites had graduated from high school. More fathers than mothers, however, attained education at levels beyond high school.

The occupational status of parents was reported by current and former students who responded to the mail questionnaire. Information in table 3.11 shows the occupations held by parents of responding students.

TABLE 3.11

PARENTS' OCCUPATIONAL STATUS AS REPORTED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRES

Occupational Status	Percent of Parents by Type of Site			
	High Placement Site[a]		Low Placement Site[b]	
	Mother	Father	Mother	Father
Clerical	16	1	20	3
Crafts	1	14	2	17
Farming	1	6	>1	3
Homemaking	38	>1	32	0
Laborer	2	8	1	7
Administrator	2	7	4	9
Military	0	3	0	4
Operative	5	11	3	6
Professional	6	5	10	8
Service	6	1	5	2
Sales	3	2	0	2
Technical	1	3	>1	3
Other	8	16	9	11
No Response	8	13	9	11
Totals[c]	100	98.2	101.7	98

[a] N = 457
[b] N = 651
[c] Totals do not equal 100 percent due to rounding.

As indicated in table 3.11, a somewhat greater percentage of high placement site fathers were in farming and operative jobs than low placement site fathers. A greater percentage of low placement site fathers were in clerical, administrative, military, professional, and service jobs than high placement site fathers. A greater percentage of mothers were homemakers at high placement sites than at low placement sites (32 percent). At high placement sites a lower percentage of mothers held clerical, professional, and administrative jobs than mothers at low placement sites.

In summary, the total number of respondents to the mail questionnaire was 5,062, which represents 25 percent of the 20,306 questionnaires mailed to 62 sites in seven states. In the same seven states, 438 individuals were interviewed at the state vocational education agency and at the eight case study sites. Over a third (36.6 percent) of the mail questionnaire respondents represented low placement, low labor demand metropolitan sites. The majority of the case studies were in metropolitan sites with more high labor market demand (five out of eight) than low labor market demand. More than half of the mail questionnaire respondents (3,051 of 5,062) and case study interviews (233 of 438) represented low job placement sites.

At high placement sites parents appeared to have less education than at low placement sites. A greater percentage of fathers at high placement sites held jobs more related to traditional vocational education areas than fathers at low placement sites. A greater percentage of mothers held clerical, administrative, and professional jobs at low placement sites than at high placement sites.

Labor Market Factors

Labor Market Conditions

Perspectives on the employability of former vocational education students have been postulated by economists, educators, legislators, journalists, and others. Their perspectives focus on a number of variables, some of which can be categorized as socioeconomic variables or labor market factors. The following narrative highlights certain labor market factors which seem to relate to the job placement of former vocational education students.

Existing data were used to provide descriptive information about selected socioeconomic variables and analyzed to indicate differences between the high and low placement sites. Table 3.12 displays selected labor market indicators for the communities where the sixty-two sites in the study were located.

TABLE 3.12

SELECTED LABOR MARKET INDICATORS FOR THE SIXTY-TWO SITE COMMUNITIES IN THE STUDY

Type of Site	Site Number	Population (1975)	Per Capita Income	Unemployment Rate	Total Number Industries	Number of Industries With Over 250 Employees (1977)
High	1	644,688	$4,023	5.6	13,184	125
Job	2	280,929	4,336	4.5	5,757	25
Placement	3	165,071	4,821	3.4	4,066	14
Communities	4	537,929	4,801	3.6	13,938	81
	5	40,460	3,902	2.1	730	1
	6	99,128	3,971	2.8	1,892	1
	7	416,892	4,952	3.7	11,818	93
	8	25,204	3,081	3.7	246	0
	9	63,066	5,487	4.4	1,865	2.5
	10	2,517,726	4,966	6.6	33,582	334
	11	669,813	5,112	6.6	11,091	78
	12	966,625	6,350	6.6	23,497	117
	13	64,567	3,345	6.8	976	11
	14	43,310	3,241	6.6	553	7
	15	43,310	3,241	6.6	553	7
	16	58,914	3,342	7.1	1,217	9
	17	61,894	3,435	5.5	1,413	5
	18	17,215	3,955	3.8	343	0
	19	15,631	2,822	5.5	227	3
	20	11,721	2,943	5.0	117	1
	21	8,894	4,930	1.7	271	0
	22	12,846	4,165	2.7	340	0
	23	41,967	5,051	2.8	947	7
	24	25,143	2,782	5.5	402	0
	25	24,677	2,809	7.1	469	0
	26	83,459	3,831	6.5	1,692	13
	27	44,558	3,714	6.7	531	1
	28	100,745	3,924	9.1	2,229	22
	29	14,252	2,975	7.5	246	0
	30	12,774	3,504	6.4	23	1
Means:		237,114	$3,994	5.22	4,474	43

(continued)

TABLE 3.12
(continued)

SELECTED LABOR MARKET INDICATORS
FOR THE SIXTY-TWO SITE COMMUNITIES IN THE STUDY

Type of Site	Site Number	Population (1975)	Per Capita Income	Unemploy- ment Rate	Total Number Industries	Number of Industries With Over 250 Employees (1977)
Low	1	423,601	$4,641	5.0	8,909	81
Job	2	244,724	5,248	6.6	4,264	42
Placement	3	77,804	4,498	5.3	1,209	8
Communities	4	61,734	3,829	8.4	922	5
	5	141,664	4,755	5.6	2,434	26
	6	201,366	4,764	5.7	4,017	37
	7	121,945	4,243	6.0	2,608	6
	8	223,120	4,024	5.6	4,208	21
	9	156,971	4,089	8.2	2,543	25
	10	2,517,726	4,966	6.6	33,582	334
	11	966,625	6,250	6.6	23,497	117
	12	449,606	4,593	7.5	6,524	26
	13	2,517,726	4,966	6.6	33,582	334
	14	848,1[illegible]0	5,878	6.5	21,671	74
	15	409,970	4,713	6.1	10,005	56
	16	643,540	5,189	6.3	13,702	64
	17	202,183	4,198	7.2	5,341	35
	18	26,226	3,567	4.5	517	0
	19	29,098	3,675	5.7	657	1
	20	5,089	2,838	4.9	70	0
	21	9,444	2,640	5.6	133	0
	22	71,501	3,864	5.9	1,121	9
	23	49,299	3,449	5.8	778	2
	24	45,526	3,957	5.7	559	3
	25	18,690	2,834	10.4	275	5
	26	45,725	4,431	9.3	1,248	3
	27	19,998	2,885	7.7	273	0
	28	37,989	3,567	6.1	727	1
	29	44,875	4,005	7.7	1,470	7
	30	170,549	4,313	8.4	3,151	28
	31	14,795	3,215	11.9	326	0
	32	69,467	3,766	7.5	1,272	6
Means:		339,586	$4,183	6.78	5,987	50

As indicated by the data in table 3.12, the average population in the high job placement communities was lower than in the low job placement communities. Tables A.2 and A.3 indicate that there was more migration to and from the low placement communities, while the high placement communities appeared to have a more stable population between 1970 and 1975. The mean per capita income was lower in the high placement communities than in the low placement communities. The total number of industries and the number of industries with over 250 employees was lower in high job placement communities. Further analysis of existing data is displayed in table 3.13 which shows the difference between high and low placement sites for five selected socioeconomic variables.

TABLE 3.13

SIGNIFICANT DIFFERENCES BETWEEN HIGH AND LOW PLACEMENT SITES FOR SELECTED SOCIOECONOMIC VARIABLES

Socio-economic Variables [a]	Number of High Placement Sites	Number of Low Placement Sites	t-value	Probability
Percent of the workforce unemployed	30	32	-3.54	0.001
Percent of the workforce that are 18-19 year olds	30	32	-2.92	0.005
Health care is a major industry	30	32	-2.28	0.028
Percent change in per capita income	30	32	2.10	0.040
Manufacturing is a major industry	30	32	2.03	0.046

[a] See Appendix C for definitions of socioeconomic variables.

As the information in table 3.13 shows, the percentage of unemployment in communities with low job placement was significantly higher than in communities with high job placement. There was a higher percentage of eighteen to nineteen-year-old females in the workforce in communities with low placement. In low placement communities, health care was a major industry while in high placement communities, manufacturing was the major industry. In high placement communities, the per capita income (1969-1974) increased more, on the average, than it did in low placement communities.

The average size of the population in the low placement communities was higher and remained higher between 1970 and 1975. There was more migration to and from the low placement communities, while the high placement communities appeared to have a more stable population during that time.

There was a significant correlation between the labor market unemployment rate and related job placement in the analysis of existing data at the sixty-two study sites. This $r = -0.58$ correlation was significant beyond the 0.00 level. Moreover, in the regression analysis the standardized Beta coefficient of this variable was significant beyond the .01 level. (See table A.34). A further analysis of the mail questionnaire data using discriminant function analysis revealed that unemployment rate was a significant discriminatory variable between high and low job placement sites (see table A.43). The results appear to be supported by Kalachek (1969) in an analysis of youth employment and overall unemployment rates. He found that employment among males, ages fourteen to nineteen, and among females, ages fourteen to seventeen, was quite sensitive to changes in the overall unemployment rate. Moreover, he states that, "evaluated at the mean, the elasticity of group employment with respect to total employment ranges from 2.5 to 4 for older males and from 3.5 to 6 for younger males and females (as the unemployment rate varies, assuming a constant-sized labor force)."

Labor market demand (number of job openings) also emerged as an important factor in job placement in the analyses of the mail questionnaires. Respondents were asked to rate the amount of difficulty that lack of available jobs poses to vocational education graduates attempting to obtain jobs. Correlations between the respondent ratings and job placement rates reached significant levels ($p < .05$) for the respondent groups of teachers ($r = -.49$), counselors ($r = -.33$), and parents ($r = -.27$). These results suggest that at those LEAs where the difficulty created by a lack of jobs was more evident, as defined by the respondent groups, placement rates were lower. This question also emerged as a significant factor in the multiple linear regression analysis performed on the responses of parents and school faculty members and employers (see tables A.27, A.30, and A.33 respectively). In a further analysis of the mail questionnaire data using discriminant function analysis, the level of difficulty "no jobs available" posed for former students in finding a job, was found to be a major discriminatory variable (see table A.43). These data are congruent with the assertions of case study interviewees, that job placement rates and labor market demand are highly correlated. "The more jobs there are in the community, the more placement there is from the schools", was frequently expressed by interviewees at the case study sites.

In support of their findings, Mertens et al. ([illegible]0) summarized the results of three rigorous studies (1968 to 1979) on the effects of participation in vocational education and identified reasons why former vocational education students accept employment in an unrelated area. That summary indicated that the five most common reasons for obtaining unrelated employment (from the most to the least popular) were as follows: no job available in training area - other - didn't like the job or work - high school training insufficient - and couldn't earn enough money in related field. Further, in examining those results by generic program areas the most common reasons for each program area were as follows: agriculture - no job available in training area; distributive - no job available in training area; health - didn't like the job or work; home economics - no job available in training area; office - tie between no job available and other; technical - other; and trade and industry - no jobs available in training area.

Additional evidence was offered in Eninger's (1972) Project Metro study. The results of the study showed that the most common reason for former students obtaining jobs unrelated to their training was the former students' inability to find a related job. At the eight case study sites, however, the labor market demand, expressed in terms of unemployment rates, was not a reliable predictor of job placement rates for individual sites. A closer examination of the socioeconomic indicators for the eight case study sites is provided in table 3.14.

TABLE 3.14

SELECTED SOCIOECONOMIC INDICATORS FOR THE EIGHT CASE STUDY SITE COMMUNITIES

Sites	Site Number	Population (1975)	Per Capita Income (1974)	Unemployment Rate (1978)	Total Number of Industries (1977)	Number of Industries With Over 250 Employees
High	1	43,310	$3,241	6.9	553	7
Placement	2	63,066	5,487	4.8	1,865	25
Communities	3	537,939	4,801	3.6	13,938	81
	4	3,500	4,930[a]	1.7	271[a]	0[a]
Low	5	244,724[a]	5,248[a]	5.4[a]	4,264[a]	42[a]
Placement	6	409,970	4,213	6.1	10,005	56
Communities	7	202,183	4,198	7.2	5,341	35
	8	61,734	3,829	5.7	922	5

[a] County statistics used due to unavailability of city/town statistics.

The data in table 3.14 show the unemployment rates for each site. The mean rate of unemployment for the four high placement sites was 4.25 percent compared to the mean of 6.1 percent for the four low placement sites. One high placement site community, however, had an unemployment rate of 6.9 percent while three low placement sites communities had lower unemployment rates of 5.4, 5.7, and 6.1 percent.

Additional [illegible]igation at the case study sites revealed that while the average labor demand rate was an indicator for job placement opportunities in general, a number of other factors impinged upon related job placement. During the case study interviews, employers frequently pointed out that unemployment rates are averaged for all jobs possible in a community, and the demand for a specific training related job is frequently difficult to ascertain from the average labor demand rate for all jobs. Employers also indicated that if the demand for specific training related jobs in a community could be defined, it would be a better predictor of job placement opportunities than the overall average labor market demand. However, a major definitional or specification problem associated with these phenomena has been the identification of the vocational student and the specific training relatedness of the job. Li et al. (1981) indicated that method of curriculum identification (transcript versus self-report) for vocational students can affect estimates of the labor market effect of vocational education. They add that this is particularly true in the areas of business, health, trade and industry, and home economics, as well as for sex and race differences. In examining the data from the new Youth Cohort of the National Longitudinal Survey of Labor Market Experiences, Li et al. (1981) found that the overall pattern showed a small decrease in vocational students obtaining related placement when the transcript method of indentification was used. Moreover, the many problems associated with the classification of curriculum and the training related definition and calculation are numerous and are a field for major exploratory and confirmatory research efforts (see McKinney et al. 1978, and Mertens et al. 1980).

Another variable which is considered as a factor existing in a labor market which relates to job placement is availability of transportation. Lack of transportation emerged as a very significant barrier to employment during the statistical analyses of the mail questionnaires. All the respondent groups were asked to rate the amount of difficulty that lack of transportation posed to vocational education graduates trying to obtain jobs. The ratings for teachers (r = -.25), principals (r = -.25), counselors (r = -.36), and current students (r = -.36) were found to be related to job placement rates (see tables A.19, A.20, A.23 and A.25, respectively). In the multiple regression analyses, the difficulty posed by transportation emerged as an important factor in placement among former and current vocational education students (see tables A.28 and A.29, respectively). Also, this question was found to be a significant variable in the discriminant function analyses for the respondent groups of employers, advisory council members, administrators (principals and directors), current students, former students, and faculty (vocational education teachers, counselors, and job placement specialists) (see table A.45). Together, these results suggested that at sites where transportation is rated as posing relatively more difficulty in job placement, placement rates were lower. Thus, if the ratings have validity, adequate transportation is necessary for optimizing job placement rates. These results are supported by a study by Borus et al. (1980). In the National Longitudinal Survey (NLS) of a representative sample of 12,693 youth, age fourteen to twenty-one, the lack of adequate tranportation and the mismatch in the location of jobs and workers were found to be major barriers. Moreover, the NLS results show that lack of transportation is cited as an impediment to getting a good job by 30 percent of youth, including 43 percent of black males.

Analysis of the existing data (table A.3) indicated that the job placement rates were positively correlated with sites having proportionally smaller industries. Large industries were defined as having more than 250 employees. This finding was further corroborated at the sixty-two questionnaires sites. There was a significant positive correlation (0.35) between proportionally fewer large industries and high job placement sites. This finding could indicate that vocational education was not serving large industries, that large industries tended to have their own training programs or preferred to recruit employees from other pools of labor. Most of the 588 employers who responded to the questionnaires represented small industries. The information in table 3.15 provides a distribution of the size of firms represented.

TABLE 3.15

DISTRIBUTION OF SIZES OF FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE SURVEY

Type of Site	Number of Employers Responding	Percent of Firms by Number of Employees							
		>10	10-99	100-499	500-999	1000-2499	<2500	No Response	Totals[a]
High Job Placement	231	24	39	16	8	4	3	6	100
Low Job Placement	357	21	49	18	5	3	2	3	101

[a] Total does not equal 100 percent due to rounding.

Most employers represented firms with fewer than 100 employees as shown by the information in table 3.15. At low placement sites, 70 percent of the firms had 1 to 100 employees in comparison to 63 percent of the firms at high placement sites. More high placement sites (19 percent) than low placement sites (11 percent) had large industries with more than 500 employees. The employers who responded to the questionnaires represented diverse types of industry. Table 3.16 provides a distribution of firms represented by employers responding to the mail questionnaires.

TABLE 3.16

DISTRIBUTION OF TYPES OF FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE

Types of Firms	Percent of Employers Responding	
	High Placement Sites[a]	Low Placement Sites[b]
Agricultural	3	3
Construction	4	2
Manufacturing	19	13
Utility	5	1
Transportation	1	1
Wholesale	4	5
Retail	25	29
Finance	6	6
Service	11	11
Federal government	1	1
State government	1	4
Other	17	21
No response	3	3
Totals	100	100

[a] N = 231
[b] N = 357

108

The largest group of employers represented retail firms at both high placement sites (25 percent) and low placement sites (29 percent). The second largest group (20 percent) of low placement sites represented miscellaneous types of industries, while the next largest group (13 percent) was from manufacturing firms. Manufacturing firms were the second largest group (19 percent) represented at high placement sites, with miscellaneous types of firms the third largest at 17 percent. These data corroborate the finding in the analysis of the existing data that manufacturing as a major industry correlated positively (at the .05 level) with high job placement.

The presence or absence of employee unions in the industries represented by the responding employers did not vary significantly between high and low placement sites. In fact, as the information in table 3.17 shows, the majority of the employers who responded to the mail questionnaire indicated there were no unions present in their firms.

TABLE 3.17

PRESENCE OF UNIONS AT FIRMS REPRESENTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE

Type of Site	Number of Employers Responding	Percent of Firms Having Unions			
		Yes	No	No Response	Totals[a]
High Job Placement	231	14	79	7	100
Low Job Placement	357	11	81	7	99

(a) Total does not equal 100 percent due to rounding.

As most of the firms represented by the respondents had fewer than 100 employees, it was not unusual to find a very low number having employee unions. The presence of unions did not appear to correlate with high or low job placement in any of the data analyzed from the questionnaires.

At case study sites, on the other hand, a number of interviewees asserted that unions did influence the hiring of vocational education graduates. At one high placement site an administrator explained that "the requirements of union membership can affect who will be employed. To be hired at the telephone company, for example, one has to be a union member." At another high placement site a counselor observed that "in recent years the efforts of unions have been quite effective in getting women into nontraditional jobs." At a low placement site an employer felt that "unions are very strong--they insist upon hiring on a seniority basis." A vocational teacher at this site agreed, observing that, "when union people are laid off, employers won't keep the co-op youth on the job." In reviewing union attitudes on youth employment, Osterman (1980) indicates that many individuals saw youth workers as a threat to their consituencies' employment chances. Highlighting statments of union leaders in support of the National Youth Act (1938) he states that their attitudes have not changed substantially over time. Osterman (1980) quotes one labor leader as stating, "the educators could do more to keep youth from the competitive field, keep them employed in some way...we must find a way not to have youth competing with adults." (pp. 70-71)

In summarizing the industrial characteristics considered in this study, it appeared that there was higher job placement in sites with proportionally more small industries (having fewer than 250 employees) and a greater number of manufacturing firms. Low job placement sites were located in sites with more large industries, more retail firms, and fewer manufacturing firms than found in sites with high job placement sites. Unions appeared to be a factor, according to several interviewees who described both positive and negative influences that unions appeared to have upon placement of former students.

Community Factors

While there were many similarities among the sites studied, each community was unique in its history of growth and change, in its political and social issues, and in its economic base. There were no "typical" high placement or low placement site communities. Information from state and national data bases was compiled to provide a profile of the communities where the participating site in the mail questionnaires and case studies were located. Table 3.18 displays selected educational variables compiled from existing data for the sixty-two study sites. (Additional discussion of the information in this table can be found in the LEA Program Characteristics section of this chapter.)

As shown by the information in table 3.18, the mean LEA enrollment was lower in high job placement communities (8,478) than in low job placement communities (16,778). Proportionally fewer whites were enrolled in the schools, more students were enrolled in vocational education programs, and more studente were in youth organizations at the high job placement communities. The mean of

TABLE 3.18

SELECTED EDUCATIONAL VARIABLES FOR THE COMMUNITIES OF THE SIXTY-TWO LEAS IN THE MAIL QUESTIONNAIRE AND CASE STUDIES

High Job Placement Site	Total LEA Enrollment	Number of Whites Enrolled	Total Vo Ed Enrollment	Number in Youth Organization	Dropout Rate Percent	Median Education Level of Males	Median Education Level of Females
1	50,913	15,892	8,325	2,730	---	11.1	11.4
2	34,149	28,154	1,090	316	7.2	12.6	12.5
3	14,360	12,702	976	229	8.5	13.0	12.7
4	---	---	819	---	---	12.4	12.3
5	2,181	2,082	1,064	---	9.6	12.2	12.2
6	22,214	19,635	1,001	---	---	12.6	12.4
7	5,176	4,294	510	---	9.1	12.4	12.3
8	5,520	5,485	1,407	---	7.2	7.9	8.4
9	11,658	7,664	3,267	---	7.5	11.1	11.4
10	3,512	3,436	295	---	3.5	11.5	11.8
11	5,859	5,795	732	125	5.4	12.1	12.2
12	6,461	6,374	528	---	5.0	12.5	12.4
13	9,345	8,730	1,365	773	---	9.3	9.7
14	6,926	5,692	1,821	1,190	---	10.1	10.4
15	3,200	2,352	488	297	---	11.6	11.4
16	2,219	2,014	416	98	---	10.0	10.1
17	---	---	616	---	---	10.9	11.2
18	3,722	2,904	1,355	---	5.5	9.5	11.1
19	3,596	3,024	930	433	---	9.0	9.3
20	2,526	2,333	625	512	---	8.9	9.3
21	1,168	1,125	173	270	3.2	11.6	12.1
22	1,159	1,029	236	---	6.8	11.9	12.0
23	12,085	9,280	794	---	---	12.7	12.4
24	3,036	2,827	52	---	15.9	9.5	10.2
25	2,953	644	975	455	---	8.6	9.3
26	7,278	6,863	2,060	1,162	---	11.6	11.3
27	3,989	3,042	1,042	344	---	12.4	12.0
28	7,693	7,644	533	---	---	12.1	12.2
29	1,322	1,038	320	---	7.3	8.9	10.0
30	3,175	3,069	297	---	5.0	10.2	10.9
Means:	8,478	6,254	1,137	638	7.11	11.0	11.2

(continued)

TABLE 3.18

(continued)

SELECTED EDUCATIONAL VARIABLES FOR THE COMMUNITIES OF THE SIXTY-TWO LEAS IN THE MAIL QUESTIONNAIRES AND CASE STUDIES

Low Job Placement Sits	Total LEA Enroll-ment	Number of Whites Enrolled	Total Vo Ed Enroll ment	Number in Youth Organiza-tion	Dropout Rate Per-cent	Median Education Level of Males	Median Education Level of Females
1	6,370	6,081	249	---	4.9	12.1	12.2
2	2,138	2,132	295	45	1.5	12.7	12.6
3	5,947	5,838	846	77	4.0	12.3	12.3
4	3,282	2,645	209	---	6.8	11.4	11.8
5	1,331	1,358	230	50	5.0	12.0	12.1
6	3,008	2,983	311	29	5.4	12.3	12.3
7	22,185	14,747	3,809	---	---	12.6	12.3
8	46,420	32,861	6,311	---	---	12.1	11.8
9	3,454	452	292	22	6.4	11.3	11.8
10	17,065	16,820	2,699	---	3.7	11.5	11.8
11	12,938	12,787	3,187	45	8.1	12.5	12.4
12	8,195	7,689	601	39	6.5	12.0	12.1
13	3,823	625	1,134	27	6.6	11.5	11.8
14	136,576	102,784	19,923	---	---	12.2	12.2
15	83,792	63,781	17,552	---	---	12.2	12.2
16	89,787	74,391	16,411	---	---	12.0	12.1
17	24,151	23,853	1,124	---	---	12.3	12.4
18	1,658	1,494	189	41	5.8	11.3	12.1
19	7,268	5,195	1,338	---	---	10.6	11.3
20	1,444	1,345	423	---	---	8.3	9.5
21	2,409	795	525	---	---	8.0	9.2
22	2,878	2,324	290	---	3.3	11.1	11.8
23	4,568	4,276	1,233	30	3.1	12.0	12.2
24	2,161	2,148	452	---	5.6	11.8	12.0
25	2,519	1,764	884	545	---	9.2	9.5
26	8,861	6,565	1,198	---	---	12.1	12.1
27	4,514	3,247	961	---	---	9.9	10.7
28	6,826	6,251	1,622	---	---	10.7	11.1
29	9,650	9,537	548	---	7.4	12.2	12.3
30	3,951	3,887	569	56	---	12.1	12.2
31	2,588	2,557	280	---	10.0	10.4	11.4
32	5,144	4,938	628	34	7.6	12.2	12.3
Means:	16,778	13,386	2,699	80	5.7	11.5	11.7

the dropout rate was 7.1 at high placement sites compared to 5.7 at low placement sites. The higher the percentage of dropouts, the higher the job placement rates. It may be that good employment conditions enticed students to drop out of school and these same positive employment conditions also may have facilitated job placement for graduates of vocational education programs.

The mean educational level of both males and females was lower at high placement sites (11.0 and 11.2) than at low placement sites (11.5 and 11.7). The negative relationship between the educational level of the population with high placement sites indicates that the higher the median level of education in the commmunity, the lower the rate of related job placement. It can be inferred that students at low placement sites perceived a wider range of options than taking jobs related to their vocational education-related fields. Students in communities with higher median educational levels appeared to make career decisions more frequently to continue their education at postsecondary schools or work in nonrelated jobs. In contrast, it appears that students in communities with lower median educational levels had fewer viable alternatives to that of remaining in their vocational education related field.

TABLE 3.19

DISTRIBUTION OF EDUCATIONAL LEVELS BY SEX
FOR THE POPULATION AT THE CASE STUDY SITES

		Mean Educational Level		
Type of Site	Site	Male	Female	Means
High Placement	1	11.6	11.4	11.5
	2	11.7	12.1	11.0
	3	12.4	12.3	12.35
	4	11.1	11.4	11.25
Means:		11.7	11.8	11.75
Low Placement	5	12.2	12.2	12.2
	6	12.3	12.4	12.35
	7	12.7	12.6	12.65
	8	11.4	11.8	12.65
Means:		12.2	12.3	12.2
Means for all sites:		11.9	12.25	

Table 3.19 provides a closer examination of the education levels of the population at the eight case study sites. The mean educational level for the population at the four high placement sites was 11.7 years of education in comparison to the mean of 12.2 for the four low placement sites. Information in table 3.19 shows the education levels by sex for these sites.

The ethnic makeup of the eight case study site communities indicated a trend towards a greater percentage of minorities at the high placement sites. The population at three of the high placement sites was 14-18 percent minorities, while the fourth site was less than 3 percent minority. In comparison, the population at the low placement sites had a lower percentage of minorities, averaging 8 percent at all but one site that had less than 1 percent minorities. The analysis of existing data (tables A.2 and A.3) further indicated a trend towards a positive relationship between the percent of related placement and communities with more nonwhites in the population. It appeared that student placement in related jobs is higher in communities with greater percentages of minorities comprising the population.

Education Factors

Philosophical Positions

Philosophical positions relative to job placement as a goal of secondary vocational education were determined through interviews at the case study sites and through information obtained from the mail questionnaires. At both high and low placement sites, case study interviewees and mail questionnaire respondents appeared to believe that job placement was not the most important goal of the vocational education programs. The most prevalent belief appeared to be that student's placement in a job related to training was less important than providing students with employability skills, with an awareness of various occupations, or with the opportunity to explore various jobs.

In the case studies, there was an apparent difference between key interviewees at high and low placement sites toward the relative importance of job placement as one of the goals for vocational education programs. More administrators and vocational education teachers appeared to support placement not only as a goal but also in practice at high placement sites than at the low placement sites. Regardless of the presence of a placement office, at high placement sites more resources such as teachers' time and opportunity to contact employers, bulletin boards posting job opportunities, and collections of information regarding occupations in the local area were provided to enhance job placement.

At one low placement site an employer voiced the predominant opinion at that site regarding placement wne he said:

> Vocational education should not be responsible for placement of graduates in jobs related to their training. Vocational education gives students a better perspective of life in the world of work.

The consensus among interviewees was, as a school administrator stated, "teachers are the key to placement." Interviewees credited teachers, more than any other school personnel, with placing graduating or former students in jobs related to their training. According to a state director of vocational education, "the role of the teacher is a critical factor in placement. The more knowledgeable teachers are about their craft, the more likely placement rates will be high." Current students cited teachers most frequently as their potential contact for future jobs. Parents and other community members also cited frequent instances of job placements made by teachers. A parent at one high placement site explained that, "a teacher knows his students' needs, strengths, and weaknesses as well as the needs of the training related employers, and it is thus very important for the job placement of students." Interviewees at all the case study sites recognized teachers as the single most important group of school personnel in placing students.

Placement was not considered the responsibility of teachers as a matter of written policy at any of the case study sites. A state director said that, "in the majority of the local school systems in the state, vocational education teachers have never been told that placement is their responsibility." The placing of students was not used as a criterion for evaluating teachers at any of the case study sites. Nonetheless, most teachers, especially at high placement sites, appeared to believe, as one teacher stated, "placement is my responsibility."

At the high placement sites, vocational education teachers appeared to be more actively involved in job placement and appeared to have a greater sense of identification with their role in the placement process than teachers at the low placement sites. Several teachers at high placement sites indicated that they perceived support from the school administration and the community for their role in job placement. Teachers described their job placement responsibilities as including the teaching of job-seeking skills, maintaining communication with employers in the community, and recommending students to employers.

A number of teachers at low placement sites were frustrated by what they perceived as "impossible obstacles" to job placement. For example, as one noted:

> since we don't have control over who comes into the programs, placement can't be an adequate reflection of our teaching abilities. Furthermore, if we are to place students, we want to have time to do so.

At another low placement site several teachers felt that placement was not their responsibility, "we just aren't going to take on more duties." An administrator at this site pointed out that:

> while there may not be anything that can be done about this attitude of current teachers not being responsible for placement, something could possibly be done to avoid this attitude of nonresponsibility for those teachers through preservice.

Teachers at both high and low placement sites pointed out that the lack of time and opportunity to upgrade their skills, maintain contact with employers, and write in-depth recommendations for students detracted from job placement. Teachers at both high and low placement sites believed placement would be increased if their school had a placement office which would serve as a central clearinghouse to gather and disseminate information and provide clerical assistance. The key role of the teacher in placement underscores the heavy demands placed upon vocational education instructors. As Newcomb (1980) noted, the vocational teacher must be both occupationally and pedagogically competent. Instructors who are highly skilled in either of these aspects but not the other are fulfilling only a portion of their duties.

In the literature review, several authors stressed the importance of the administrator's role in the success of vocational education programs. Kaufman et al. (1967) found that principals who are out of touch with the vocational program can contribute to low placement rates for students. Kaufman et al. found principals were primarily interested in the more academic aspects of education and seemed to have little contact with or knowledge of the vocational education programs offered at their schools. Similarly, Social, Education Research and Development, Inc. (1968) found that, "good teacher-principal relations, with emphasis on the supportive role of supervision", was one element which helped to produce an effective vocational education program. In addition, Gross and Herriot (1965) suggested that when administrators lend their active support and interest to a policy, staff members tend to work harder to achieve that policy's objective.

From the case studies it appeared that positive attitudes of administrators, especially superintendents and principals, appeared to be essential at the school level for providing philosophical and financial support to vocational education and job placement. A state director explained that:

> school administrators go through traditional administrative programs at the university level with no vocational component. Therefore, they see vocational education as another subject area and do not see job placement as part of their or their teachers' duties.

At low placement sites most teachers appeared to believe that the principals did not support the vocaitonal education programs. One teacher stated a commonly held belief that, "I don't believe placement is considered a goal of vocational education by the school administrators." At another low placement site a teacher explained that, "The administration looks on vocational education as a dumping ground for low ability and hard-to-handle students."

While the attitudes of vocational education directors were positive towards vocational education and job placement as one goal of vocational education, they did not have direct lines of authority over other key administrators. At most of the case study sites the principal was the key decision maker regarding school level support and allocation of resources for vocational programs. In contrast to low placement sites, superintendents and principals at high placement sites appeared to have greater commitment to vocational education and to job placement as one goal of vocational education. Key administrators at low placement sites appeared less concerned, less involved and less supportive of vocational education and job placement. However, evidence from the correlational analyses of the mail questionnaires suggested that the attitudes of directors were related to job placement. The rankings assigned by directors to the goal of placement in a training related job ($r = .36$), the creation of an awareness of different occupations ($r = .27$, and placement in a job not necessarily related to training ($r = .26$), were positively related to placement rates. Those results suggest that the goals a director holds for a program may influence job placement rates.

Regardless of their philosophy of vocational education, superintendents and principals at both high and low placement sites did not believe that placement was the primary goal of secondary vocational education. As one principal pointed out at a high placement site:

> vocational education is doing the student a lot of good, whether or not he continues in the field that he trained for. The vocational program is serving a worthwhile purpose if it allows a student to try out a trade and discover it is not what he wants to do.

The responses from the eleven respondent groups to the mail questionnaires concurred with the case study interviewees concerning the goals of secondary vocational education programs. As shown in table 3.20 the respondents at both high and low placement sites indicated that placing students in jobs related to their training was not the most important goal of secondary vocational education. Moreover, the goal of placement in a related job was ranked fourth by the majority of the respondents. Respondents agreed that providing students with skills needed to obtain a job was ranked first as the most important goal of secondary vocational education. The data in table 3.20 show the ranking of goals for secondary vocational education programs by respondent group.

As the data in table 3.20 indicate, vocational education directors and mothers and fathers from high placement sites ranked placement in related jobs as second most important. Current and former students at low placement sites felt that the second most important goal of vocational education was to provide an opportunity to explore various jobs. While it appeared that teachers at high placement sites ranked placement in related jobs as third most important, the percentage was very low. The greatest percentage of respondents ranked the goals for secondary vocational education in the following order:

Goal 1. To provide students with skills needed to obtain a job
Goal 2. To create awareness of various occupations
Goal 3. To provide an opportunity to explore various jobs
Goal 4. To place students in jobs related to training
Goal 5. To place students in jobs not necessarily related to training

There was strong agreement among the respondents regarding which goals were the most important (Goal 1) and the least important (Goal 5). There was less agreement about the ranking of the other three goals.

These results agree with those of Edin (1979) who reported that 155 secondary vocational teachers from Minnesota ranked the goal of placement in a job as less important than those of occupational exploration and preparation for advanced training. Similarly, Edin reported that among the students of these teachers, the most popular reason for enrolling in vocational education centers was to prepare for further education, followed by preparation for a job and the desire to explore different occupations.

TABLE 3.20

RANKING OF THE GOALS FOR SECONDARY VOCATIONAL EDUCATION BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Respondents	Type of Site	Number of Respond-ents	Goals for Secondary Vocational Education [a], [b]: Place students in training-related jobs: Percent ranking the goal most important	Overall Ranking	Provide students with skills needed to obtain a job: Percent ranking the goal most important	Overall Ranking	Place student in jobs not necessarily related to training: Percent ranking goal most important	Overall Ranking	Create awareness of various occupations: Percent ranking goal most important	Overall Ranking	Provide an opportunity to explore various jobs: Percent ranking goal most important	Overall Ranking
Voc Ed	HPS	25	36	2	76	1	0	5	20	3	8	4
Directors	LPS	25	4	2	76	1	0	5	12	3	16	4
Principals	HPS	90	10	4	58	1	0	5	26	2	22	3
	LPS	68	13	4	60	1	0	5	19	2	12	3
Voc Ed	HPS	375	16	3	73	1	1	5	15	2	13	4
Teachers	LPS	697	15	4	66	1	2	5	18	2	17	3
Guidance	HPS	103	8	4	53	1	2	5	32	2	17	3
Counselors	LPS	240	8	4	58	1	1	5	29	2	21	3
Job Placement	HPS	2	0	0	100	0	0	0	0	0	0	0
Specialists	LPS	49	25	4	55	1	2	5	22	2	18	3
Advisory	HPS	119	18	4	61	1	0	5	19	2	15	3
Council Members	LPS	163	10	4	62	1	0	5	24	2	17	3
Employers	HPS	231	16	4	48	1	1	5	29	2	20	3
	LPS	357	13	4	60	1	1	5	20	2	17	3
Current	HPS	273	16	4	59	1	2	5	14	2	19	3
Students	LPS	386	22	4	46	1	1	5	18	3	23	2
Former	HPS	184	15	4	50	1	1	5	18	2	18	3
Students	LPS	265	13	4	51	1	2	5	21	3	22	2
Mothers	HPS	350	31	2	44	1	1	5	22	3	11	4
	LPS	484	25	4	45	1	3	5	26	2	18	3
Fathers	HPS	259	31	2	44	1	2	5	19	3	17	4
	LPS	317	22	4	45	1	2	5	26	2	17	3

[a] Percentages may sum to over 100 percent because some respondents ranked more than one goal as most important.

[b] Ranking format: most important was given a rank of 1, least important a rank of 5.

In summary, the findings from the case studies indicated that positive philosophical positions towards vocational education programs tended to enhance support for job placement as one goal of vocational education. Altman and Morrison's (1966) findings indicated the effective placement depended upon a positive focus in the school's placement activity, with the school taking the initiative in reaching community organizations and employers. In these circumstances, employers' hiring practices were favorable to the schools and also contributed to effective placement. This was especially true where employers and other community groups participated in curriculum development. In general, the graduates' satisfaction with the job followed successful placement activity. Vocational schools showed greater success than comprehensive schools in placing graduates.

At high placement sites, key administrators and vocational education teachers appeared to have a more positive regard for vocational education and subsequent job placement. Data from the mail questionnaires did not strongly support this finding, however. Teachers at high placement sites indicated a slightly higher percentage of support for training related placement than teachers at low placement sites. Both the findings from the case studies and the mail questionnaires indicated that teachers and key administrators did not believe that placement in training related jobs was the most important goal of vocational education. Respondents appeared to agree that by far the most important goal of vocational education was to provide students with employability skills. Placement in training related jobs was not considered the most important goal of vocational education programs in relation to other goals that were either ranked by respondents in the mail questionnaires or identified by interviewees at the case study sites.

Program Planning Processes

A theme which emerged from the literature review was the need for vocational educators to work closely with employers and other community representatives in the planning of vocational programs. Starr et al. (1980), in examining the federal legislative prescription affecting vocational education planning, identify several important characteristics. These characteristics include the following considerations:

- Coordination and consultation with other agencies and groups are considered as critical ingredients of planning.
- The state plan is perceived as a working plan with goals that can be measured. Its provisions are intended to affect future plans and actions of state and local educational units.

- The dual objective or focus of vocational education is meeting both the needs of employers for skilled workers and the needs of individuals for job skills.
- Evaluation findings are intended to be a vital ingredient of the planning process.

Within the context of this study these characteristics appear to relate to the job placement of former vocational education students. Focusing on two of the above characteristics, Rall and O'Brien (1977) stated that:

> when implementation of a new curriculum is being considered it is necessary to consult with representative employers in person in order to be reasonably certain that jobs will become available. A review of national, regional, and state manpower projections may indicate broad trends - but more exact, local data are needed (p.61).

No consistent mode of vocational education program planning emerged from the analysis of interviews and documents at the eight case study sites. Administrators and teachers at all sites indicated that advisory committee input was used to some degree, but no other processes were common to all sites. State-level planning information, teacher input, and student interest were among the sources of planning information cited most frequently. At high placement sites, community needs assessment surveys were used more frequently than at low placement sites. While school personnel at the case study sites were generally supportive of needs assessment surveys in general, several indicated that surveys could not provide all the information needed for planning. One administrator from a high placement site noted that,"needs assessment can be misleading." This interviewee explained, "while the needs assessment indicated that a culinary arts course was justified, further investigation revealed that short order cooks, not chefs, were needed in the community."

Approximately half of the employers who responded to the mail questionnaires indicated that they were contacted by the school personnel regarding skill competencies needed by their industries. The information in table 3.21 shows the frequency of contact initiated by school personnel to assess skill competencies needed by the employers.

Although a greater percentage of employers at low placement sites than at high placement sites indicated they were contacted once a month, there was no significant difference in the frequency of contact between the high and low placement sites. A large percentage of employers at both high (42 percent) and low (41 percent) placement sites were never contacted by the schools to assess skill needs.

When responding to the question of how often school personnel should contact them, however, three fourths of the employers responding to the mail questionnaire indicated that they should be contacted at least once a year. The frequency of contact employers considered optimal is shown in table 3.22.

TABLE 3.21

FREQUENCY OF CONTACT BY THE SCHOOLS TO ASSESS SKILL NEEDS AS REPORTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE SURVEY

Type of Site	Number of Respond- ents-	Percent of Responses							
		Once a Month	Four times a year	Twice a year	Once a year	Never	Other	No Response	Total
High Place- ment	231	3	10	13	19	42	7	7	101[a]
Low Place- ment	357	6	9	12	21	41	6	5	100

[a] Total does not equal 100 percent due to rounding.

A greater percentage of employers at low placement sites (80 percent) as compared to high placement sites (75 percent) indicate that skill needs assessments should be conducted annually. As the information in table 3.22 indicates, there was no appreciable difference between high and low placement sites in the frequency of needs assessments actually conducted. It appeared that more employers at low placement sites recognized that schools require up to date information about skill competencies.

Over a third (36 percent) of the vocational education directors at both high and low placement sites responding to the mail questionnaires indicated that the state education agency primarily determined the skills to be taught. Table 3.23 displays information indicating who vocational education directors believe determined skills to be taught in the vocational education programs. Vocational education directors indicated that more advisory committee members determined skills at high placement sites (28 percent) than at low placement sites (24 percent).

TABLE 3.22

FREQUENCY OF CONTACT BY SCHOOLS TO ASSESS SKILL NEEDS AS CONSIDERED OPTIMAL BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRES

Type of Site	Number of Respondents	Percent of Responses							
		Once a year	Every 2 years	Every 3 years	Every 5 years	Never	Other	No Response	Total
High Placement	231	75	10	3	1	3	4	3	99[a]
Low Placement	357	80	8	1	1	1	5	3	99[a]

[a] Total does not equal 100 percent due to rounding.

Vocational education directors believed that more teachers determined skills to be taught at low placement sites (32 percent) than at high placement sites (20 percent). While only 8 percent of the vocational education directors at high placement sites determined the skills to be taught, none of the directors at low placement sites had that responsibility. No principals or guidance counselors apparently had input into determining skills taught at either high or low placement sites.

In examining priorities in local education agency planning, Starr et al. (1981) found that decisions about vocational education programs and services in many schools are often made by persons who are not vocational administrators. Further, he stated that at local secondary education agencies, planning decisions are often finalized by building principals or by district superintendents.

Many interviewees at high and low placement sites indicated that the "bottom line" of what policymakers and decision makers at the federal, state, and local levels want out of vocational education programs is nearly always reflected in the design of the formula for the allocation of funds. It was frequently noted that fund allocation formulas for vocational education programs are based largely on enrollments. No interviewees could cite an instance where placement rates were used in computing the allocation of funds.

TABLE 3.23

VOCATIONAL EDUCATION DIRECTORS PERCEPTIONS OF WHO DETERMINES VOCATIONAL EDUCATION SKILLS TO BE TAUGHT AS REPORTED IN THE MAIL QUESTIONNAIRE

Individuals or Group	Percentage of Responses	
	High Placement Site	Low Placement Site
State Education Agency	36	36
Local Vocational Education Advisory Committee	28	24
Local Vocational Education Director	8	0
Principal	0	0
Vocational Education Teacher	20	32
Guidance Counselor	0	0
Other	4	0
No One	0	0
No Response	4	0
Totals	100	100

In summary, the most frequent sources of information for program planning were needs assessments, state level planning data, teacher input, and student interests. Although several school administrators indicated they are cautious when interpreting results of needs assessments for planning purposes, approximately half of the employers responding to the mail questionnaire had participated in needs assessments conducted by the schools. Employers indicated they should be contacted more frequently, with three-fourths wanting yearly opportunities to provide input. Vocational education directors believed that the state education agencies, the local vocational education advisory committees, and the vocational education teachers most frequently determined the skills to be taught in the vocational education programs.

Business/Industry Involvement

Findings from the mail questionnaire, case studies, and literature review (Kaufman, et al. 1967; Bottoms 1980) indicated that most formalized involvement of business and industry in the vocational education programs was through advisory councils. As specified in the federal vocational education legislation, all federally subsidized vocational education programs must have organized advisory councils that can provide local labor market information. A state director observed that:

> there is a very definite positive correlation between active, involved advisory councils and job placement. This is probably due to the fact that they (advisory councils) are largely made up of employers, and the council activities make the employers well aware of the advantages of vocational education. These employers are prone to hire students who have completed vocational programs.

Advisory council members interviewed at both high and low placement case study sites appeared to be supportive of the vocational education programs and conscientious about their role to provide real world insights and advice to improve the programs. Most of the council members interviewed had been invited to join the council by a vocational education teacher who had known them previously. Most could discuss issues and concerns related to at least one vocational education program.

TABLE 3.24

SEX AND ETHNIC ORIGIN OF ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Type of Site	Number of Respondents	Percent by Sex				Percent by Ethnic Origin				
		M	F	No Response	Total	White	Black	Other	No Response	Total
High Placement	119	72	26	2	100	87	10	2	1	100
Low Placement	163	67	31	2	100	91	3	3	3	100

TABLE 3.25

EDUCATIONAL LEVEL AND PRESENT OCCUPATIONS OF ADVISORY COMMITTEE MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

	Percent of Responses	
Education Level	High Placement Sites(a)	Low Placement Sites(b)
Less than high school	4	4
High School	21	17
1-3 yrs college	13	27
4 yrs college	23	14
Above 4 yrs college	36	37
Others	2	1
No response	2	1
Totals	100	100
Occupations		
Administrator	44	37
Professional	23	22
Owner	6	12
Crafts	7	6
Clerical	4	5
Technical	1	1
Farmer	6	5
Others	5	9
No Response	4	4
Totals	100	100

(a) N = 119 (b) N = 163

A profile of the advisory council members who responded to the mail questionnaire is revealed in tables 3.24 and 3.25. The data in tables 3.24 and 3.25 indicate that the makeup of advisory committees was similar at high and low placement sites. At high placement sites a slightly higher percentage (72 percent) of male committee members responded than at low placement sites (67 percent), although respondents were predominently male at all sites. Whites also appeared to predominate at all sites, with 87 percent at high placement sites and 91 percent at low placement sites. There was a greater percentage (10 percent) of blacks at high placement sites as compared to 3 percent at low placement sites. Responding advisory committee members indicated attainment of a high level of education at all sites. A greater percentage (69 percent) indicated attainment of four years of college and above at high placement sites than at low placement sites (61 percent). The majority (73 and 71 percent) of advisory committee members were employed in professional and administrative positions or owned their own businesses. Relatively few (18 and 17 percent) advisory committee members indicated being employed in occupations in traditional vocational education fields such as clerical, crafts, technical, or farming.

Advisory committee members at high placement sites appeared to have shorter tenure than those at low placement sites in their respective advisory roles. In table 3.26, the data indicate the length of time respondents had been committee members.

TABLE 3.26

NUMBER OF YEARS SERVED BY ADVISORY COMMITTEE
MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Type of Site	Number of Respondents	Percent of Responses						
		1 year	2-3 years	4-5 years	6-9 years	6 + years	No Response	Totals
High Placement	119	19	40	14	6	1	20	100
Low Placement	163	19	33	17	9	4	18	100

While 19 percent of the advisory committee members had served for one year at both high and low placement sites, a greater percentage (30 percent) of the committee members at low placement sites had held their positions longer than at high placement sites (21 percent).

Advisory committee members indicated that they had participated in a variety of activities. The activities and committee member-reported percentages of participation are shown in table 3.27.

TABLE 3.27

PERCENTAGE OF PARTICIPATION
IN ACTIVITIES REPORTED BY ADVISORY COMMITTEE
MEMBERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Type of Activity	Percent of Responses					
	High Placement Sites [a]			Low Placement Sites [b]		
	Yes	No	No Response	Yes	No	No Response
Identify Job Skills Needed by Workers	62	28	10	61	34	5
Evaluate Voc. Educ. Programs	82	10	8	87	10	3
Assist Placing Students in Jobs	37	53	10	42	53	6
Develop School Policy Recommendations	61	31	8	70	26	4
Provide Occupational Information	61	29	10	72	25	4
Identify Emerging Occupations	70	21	9	73	23	4
Identify Facility and Equipment Needs	76	22	8	83	13	4

[a] N = 119
[b] N = 163

A greater percentage of low placement site committee members indicated participation in the activities with the exception of the first activity listed, "identifying job skills needed by workers". The highest percentage of participation was indicated in "evaluating vocational education programs" by both high (82 percent) and low (87 percent) placement sites. Advisory committee members at both types at sites indicated the lowest percentage of involvement (37 and 42 percent) in assisting the placement of students in jobs.

The participation of employers in vocational education programs tended to be sporadic at the case study sites. Employers typically were asked to participate in a variety of school activities from time to time. Case study interviewees frequently pointed out that personal contacts made by the teacher with businesses increased the opportunities for job placement. As one state director of vocational education said, "Contacts between teachers and businesses serve to establish a sense of mutual faith and trust between the employer and the school." Another state director emphasized, "There have to be people actively seeking placement on behalf of the students. This is one of the jobs of school personnel." An employer stated what many employers said, that "an important factor in placement is the contact by school personnel to discuss available students and course content." Most teachers agreed that, as one said, "good relations with industry, not just one company but several, are an asset in placing students." The schools did not appear to have formal schedules for maintaining contact with local employers.

TABLE 3.28

FREQUENCY THAT TEACHERS WHO
RESPONDED TO MAIL QUESTIONNAIRE
CONTACTED BUSINESSES REGARDING JOB PLACEMENT OF STUDENTS

		Percent of Frequency of Contact by Teachers							
Type of Site	Number of respondents	Once a month	Four times a Year	Twice a Year	Once a Year	Never	Other	No Response	Total[a]
High Placement	375	25	10	9	6	5	10	36	101
Low Placement	697	19	10	5	4	8	10	46	102

[a] Total does not equal 100 percent due to rounding.

In response to the mail questionnaires, a greater percentage (59 percent) of vocational education teachers from high placement sites indicated that they contacted businesses regarding job placement of students than did teachers from low placement sites (46 percent). The frequency that teachers contacted businesses is shown in table 3.28.

More teachers at high placement sites (34 percent) indicated a greater frequency (at least twice a year) of contact with employers regarding job placement of students than teachers at low placement sites (24 percent).

Job placement specialists reported a greater frequency of contact with employers regarding job placement of students than reported by the vocational education teachers. The number of job placement specialists who had received and subsequently responded to the mail questionnaire was low, however, especially from the high placement sites. The data regarding the frequency with which job placement specialists contact employers is reported in table 3.29.

TABLE 3.29

FREQUENCY THAT JOB PLACEMENT SPECIALISTS WHO RESPONDED TO MAIL QUESTIONNAIRES CONTACTED EMPLOYERS REGARDING JOB PLACEMENT OF STUDENTS

		Percent of Frequency of Teacher with Employers							
Type of Site	Number of Respondents	Once a Month	Four Times a Year	Twice a Year	Once a Year	Never	Other	No Response	Total
High Placement	2	50	50	0	0	0	0	0	100
Low Placement	49	31	8	10	10	6	18	16	100

Almost all (96 and 98 percent) of the employers who responded to the mail questionnaire surveys indicated that they had been contacted by a representative of the local vocational education program. The data in table 3.02 reveal the frequency of contacts the school representatives made with employers about job openings for which vocational education graduates are qualified. As indicated by the data in table 3.30, there was a slightly greater percentage of frequency (once a month and four times a year) of contact with employers at low placement sites (53 percent) than at high placement sites (46 percent).

A third of the employers, on the other hand, reported that they never contacted the schools when they had a job openings that could be filled by former vocational education students. In table 3.31 the data show the frequency of contact with the schools that was initiated by the responding employers.

TABLE 3.30

FREQUENCY THAT EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRES REPORTED THEY WERE CONTACTED BY SCHOOLS REGARDING JOB PLACEMENT OF STUDENTS

Type of Site	Number of Respondents	Percent of Frequency of School Contacting Employer						
		Once a month	Four times a Yr.	Twice a Yr.	Once a Yr.	Never	No Response	Total
High Placement	231	10	36	32	16	2	4	100
Low Placement	357	15	38	29	15	1	2	100

As the data in table 3.31 show, there was a very slight difference in percentage between the frequency of contact reported by employers at high placement sites and low placement sites. There appeared to be a slight trend towards more frequent initiation of contact by employers at high placement sites, although more employers never contacted schools at high placement sites (35 percent) than at low placement sites (32 percent).

TABLE 3.31

FREQUENCY THAT EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRES REPORTED THEY HAD CONTACTED THE SCHOOLS REGARDING THE JOB PLACEMENT OF STUDENTS

Type of Site	Number of respondents	Percent of Frequency Type							
		Once a month	Four times a Year	Twice a Year	Once a Year	Never	Other	No Response	Total[a]
High	231	5	12	20	16	35	8	4	100
Low	237	4	13	18	21	32	9	2	99

[a] Total does not equal 100 percent due to rounding.

Employers indicated their businesses had participated in a variety of activities initiated by the school sites. It appeared that businesses at low placement sites participated slightly more frequently than at high placement sites. In table 3.32 the information shows the percentage of participation in several activities listed on the mail questionnaires.

TABLE 3.32

FREQUENCY OF PARTICIPATION BY BUSINESS IN ACTIVITIES AS REPORTED BY EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Type of of Activity	Percentage of Responses (HPS[a], LPS[b])											
	Very Often		Often		Sometimes		Rarely		Never		No Response	
	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS
Career Days	4	6	13	12	21	18	14	13	42	44	6	8
Cooperative Education Program	7	15	15	18	21	23	11	11	37	26	9	8
Industry School Staff Exchange	1	1	4	3	6	8	13	9	67	66	10	13
Provide Guest Lecturer	1	2	7	5	19	22	19	14	47	49	8	8
Assist in Vocational Youth Clubs	2	3	9	8	18	19	16	10	49	50	8	11
Other Activities	0	1	2	1	1	1	1	1	11	8	84	87

[a] N = 231
[b] N = 357

As indicated by the percentages in table 3.32, businesses participated in cooperative education most often of all the five activities listed in the mail questionnaire. Employers at low placement sites participated in cooperative education programs more often (33 percent) than at high placement sites (22 percent). Employers reported the second highest percentage of participation in career days at both high (17 percent) and low (16 percent) placement sites. The lowest percentage of participation, with two-thirds of the employers at both high and low placement sites indicating that their businesses never participated, was reported for industry and school staff exchanges. Half of the respondents indicated their businesses never participated in providing assistance in vocational youth organizations or clubs.

The factor of amount of involvement of employers with the vocational school emerged as a significant discriminant variable between high and low placement sites from the discriminant function analysis using the respondent group faculty (teachers, counselors, and job placement specialists) and advisory council members. (Tables A.36 and A.41, respectively.)

In summary, the most formalized involvement of the business sector with secondary vocational education programs was through advisory committees. Members of advisory committees interviewed at both high and low placement case study sites were informed about at least one vocational education program and were involved in providing some degree of input to improve the program. The majority of the advisory committee members who responded to the mail questionnaire were white males with four years or more of college. The majority were administrators, professionals, or owners of their own business. Advisory committee members from high placement sites had shorter tenure in their roles. The activity most frequently conducted by advisory committee members was evaluation of vocational education programs, while the activity with the least participation was assisting in the job placement of students.

Employers who were not advisory committee members indicated sporadic involvement in the vocational education programs. While school personnel at the case study sites agreed that contact with employers enhances job placement, employers responding to the mail questionnaires reported that they were contacted less often than they felt was desirable. Vocational education teachers at high placement sites reported more frequent contact with employers than teachers at low placement sites. Employers at high placement sites, however, reported less frequent participation in placement-related activities than those at low placement sites. Employers reported they had participated most frequently in cooperative education programs and least frequently in industry/school staff exchanges.

Program Evaluation

Darcy (1979), Stevenson (1979), and Wentling (1980) argued that the evaluation of vocational education programs offers several significant benefits to educators and students. According to these authors, evaluation information can be used to--

1. improve the management and planning practices of vocational education administrators;

2. provide feedback for teachers regarding the quality of their teaching performance;

3. educate the public about the benefits of vocational education programs.

The most important finding regarding evaluation to emerge from the case studies was that at both high and low placement sites, evaluation information, particularly information obtained from mail follow-up surveys, was not effectively used for any of the three purposes stated above.

A major theme expressed in interviews was that follow-up survey information was used rarely in decision making or program improvement. Evidence for this assertion was presented by numerous interviewees, including one placement specialist who commented that, "survey results were primarily used for show and tell." An employer related that follow-up information was presented to the board of education, but to his knowledge the information was not used to formulate or redirect policy. A vocational education program supervisor stated that "follow-up results were not used in the school's vocational program." The majority of the teachers reported they had never seen any follow-up survey information, much less used it. One guidance director who had access to follow-up information explained that "follow-up information does not filter down to teachers." In addition, when project staff asked questions such as what percentage of last year's graduates enrolled in postsecondary programs, interviewees typically said they did not know. In no instance did interviewees use follow-up survey results to provide answers to such questions.

Interviewees offered several reasons to explain such minimal use of survey results. Teachers and counselors frequently noted that they believed better follow-up information could be obtained through informal follow-up activities. One counselor said the strength of the informal follow-up method was that it allowed him to evaluate the information he gained from a student in the light of the student's personality and history. This person said that "in follow-up surveys the information from good students was mixed with that from known 'outsiders', so that he could not separate information from credible or noncredible sources." Other informants pointed to the low percentage of returns from former students. These low return rates led survey users to place little faith in the survey results. Finally, other interviewees did not feel the surveys contained questions asking for the detailed kind of information needed for making program improvement decisions.

In the interviews, informants typically were asked if they could relate a decision that was made on the basis of evaluation results. The majority of interviewees were unable to relate such an instance. Occasionally, however, examples were provided where evaluation information was used in some way. For example, at one site a power mechanics course was redesigned to include more emphasis on auto mechanics as a result of follow-up information.

On the other hand, responses from the mail questionnaire indicated that some type of evaluation of vocational education programs is conducted at most sites. According to the fifty vocational education directors who responded to the mail questionnaire, vocational education programs were evaluated more frequently at high placement sites than at low placement sites. The data in table 3.33 indicates the frequency of evaluation reported by vocational education directors.

TABLE 3.33

FREQUENCY OF VOCATIONAL EDUCATION PROGRAM EVALUATION REPORTED BY VOCATIONAL EDUCATION DIRECTORS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Individuals or Groups Conducting Program Evaluation	Percent of Frequency by Type of Site (HPS[a], LPS[b])											
	Once a year		Every 2 Years		Every 3 Years		Every 5 Years		Never		No Response	
	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS
School Principals	92	60	0	4	4	16	0	8	0	4	4	8
Vocational Education Director	92	76	4	8	0	16	0	0	4	0	0	0
State Education Agency	24	4	4	4	12	40	52	40	4	12	4	0
Local Vocational Education Advisory Committee	76	44	16	4	4	40	4	0	0	8	0	4
Regional Accrediting Commission	4	4	0	0	4	8	76	64	12	8	4	16

[a] N = 25
[b] N = 25

As revealed by the data in table 3.33, vocational education directors indicated that they evaluated the programs more frequently than other parties identified in the mail questionnaire. At high placement sites, the same percentage (92 percent) of principals evaluated the vocational education programs once a year as did vocational education directors. Most (74 and 6[illegible] percent) evaluations by regional accrediting commissions were conducted every five years. Vocational education programs in at least twelve percent of the high placement sites and eight percent of the low placement sites were never evaluated by regional accrediting commissions. Similarly, the greatest percentages (52 and 40 percent) of evaluations by state education agencies were conducted every five years. There was a greater percentage (40 percent) of state agency evaluations conducted every three years at low placement sites than at high placement sites (12 percent). A greater percentage (76 percent) of program evaluations by local vocational education advisory committees was conducted every year at high placement sites than at low placement sites (44 percent). It also appeared that program evaluation was conducted at most of the sites represented in the mail questionnaire, with more frequent program evaluation conducted at the high placement sites.

To summarize, it appeared that follow-up studies and other forms of evaluation were conducted, as Franchak and Spirer (1978) and O'Reilly and Asche (1979) discussed, in compliance with reporting requirements. Program evaluation was conducted at most of the sites participating in the mail questionnaire with somewhat more frequent evaluation conducted at high placement sites. Interviewees at both high and low placement sites however, pointed out that results of evaluations, especially follow-up studies, were rarely if ever used in planning and decision making.

Counseling Processes

In the literature related to school guidance and counseling functions, effective guidance services play an important role in the successful job placement of students. Effective guidance services, according to Strong et al. (1975b), include the following services provided by guidance personnel:

> The appraisal service,...designed to collect, analyze, and use a variety of objective and subjective personal, psychological, and social data about all students for the purpose of better understanding them as well as assisting them to understand themselves
>
> An informational service,...designed to provide students with a greater knowledge of educational, vocational, and personal-social

> opportunites so that they may make better informed choices and decisions in an increasingly complex society
>
> The counseling service,...designed to facilitate self-understanding and development through dyadic or small-group relationships. The major focus of such relationships tends to be upon personal development and decision-making that is based on self-understanding and knowledge of the environment
>
> A planning, placement, and follow-up service, designed to enhance the vocational development of students by helping them to select and utilize job opportunities within the school and in the outside labor market (p. 34).

Variations of these services were identified as functions of the guidance and counseling services at the case study sites. For the purposes of this study, however, only the counseling processes regarding selection and admission of students to vocational education programs, placement in jobs related to training, and follow-up activities were considered. The majority of the data pertaining to job placement and follow-up are reported in other sections of this chapter. Findings about admissions criteria and general impressions of pertinent counseling processes are reported in this section.

In the case studies, no consistent patterns emerged as characteristic of the counseling processes regarding job placement at either high or low placement sites. At both high and low placement sites there was a great deal of similarity in the minimal role counselors perceived they had in the job placement of students. Most of the other interviewees agreed with the counselors' perceptions. The counselors' lack of time, inclination, and understanding of the vocational programs were often cited as reasons that, as one principal stated, "counselors perform very few functions related to job placement."

It appeared that the most important reason for counselors lack of involvement was that job placement was not considered a function of school guidance and counseling as defined by administrative policy. At one low placement site the superintendent said that, "the role of counselor is that of enrolling students. Counselors don't accept any responsibility for job placement." Counselors agreed, for the most part, that they did not accept much responsibility for job placement of students. A counselor at a high placement site described his role, stating the following:

> There is no way I can meet all the students' needs,

> but I can try to create an atmosphere where they know I'm available. If I know a student's interest, I'll work with it, but getting this student a job, now we just don't do that.

Another reason for counselors' lack of involvement in placement has been attributed to the college orientation of most guidance personnel. Strong (1975a) summarizes why guidance counselors may focus on college-bound students rather than vocational education students:

> Kaufman et al. (1967) suggest that one of the reasons counselors may neglect the employment-bound youth is the counselor's relatively poor preparation in the use of occupational information coupled with limited first-hand wage-earning experiences. It has also been noted that the college-bound student is more similar in background, values, and plans to the counselor than is the non-college-bound student (Shapiro and Asher, 1972). Specifically, Shapiro and Asher (1972) have reported, the noncollege-bound youth is more likely to display problems in both oral and written expressiveness. Since guidance practitioners have demonstrated a one-to-one verbal counseling interactions (Campbell, 1968), it is not surprising that students who demonstrate less verbal facility would be underrepresented in the services received (p. 29).

Counselors who responded to the mail questionnaire indicated that they spent a majority of their time (78 and 80 percent) conducting guidance and counseling activities as opposed to administration, job placement, teaching, and other activities. The data in table 3.34 indicate the amount of time respondents believe they conducted guidance and counseling activities.

The percentages in table 3.34 show that counselors and placement specialists provided the majority of guidance counseling available to students in the respondents' schools. One-fifth of the responding teachers reported that they spent less than a quarter of their time on guidance and counseling activities. One counselor's explanation of how he spent his time was similar to the explanation of several other counselors interviewed. The counselor said:

> I spend about 10 - 15 percent of my time counseling. The rest of my time is spent with orientation, sending applications to the vocational school, arranging field trips to the vocational school, and holding group or individual reviews.

TABLE 3.34

AMOUNT OF TIME SPENT CONDUCTING GUIDANCE AND COUNSELING ACTIVITIES AS REPORTED BY SCHOOL PERSONNEL RESPONDING TO THE MAIL QUESTIONNAIRE

			Percent of Time Spent in Counseling					
Respondent Groups	Type of Site	Number of Respondents	Full-time	Half-time	Quarter Time	Less Than Quarter Time	No Response	Total[a]
Vocational Education Directors	HPS	25	4	0	0	16	80	100
	LPS	25	0	0	0	4	96	100
Principals	HPS	90	12	3	1	6	78	100
	LPS	68	9	2	3	9	77	
Vocational Education Teachers	HPS	375	1	3	8	21	66	99
	LPS	697	1	2	6	20	71	100
Guidance Counselors	HPS	103	78	11	5	0	7	101
	LPS	240	80	13	1	1	5	100
Job Placement Specialist	HPS	2	50	0	0	0	50	100
	LPS	49	27	18	18	2	35	100

[a] Totals do not equal 100 percent due to rounding.

At both high and low placement sites, several student interviewees indicated they had received assistance from counselors in selecting and entering vocational education programs. More than half of the current and former students interviewed appeared to be negative about the counseling they had received. The students' negative opinions were based upon experiences they and their friends had had with counselors who, as one student remarked, "gave bad advice." Several students described instances when counselors had attempted to persuade students to select college preparatory programs rather than vocational education programs. A current student stated that, "guidance counselors stick you in something you don't like." Another current student explained that:

> Counselors always have lots of college catalogs, but seldom have much information about jobs available after high school graduation.

A former student who completed a vocational education program felt that he had been "pushed into this area." He said that "guidance counselors should spend more time with students to help them make better choices for employment later in life!" Vocational education teachers agreed with students, contending that counselors guide students to select programs other than vocational education. One teacher at an area vocational school explained that "many of the counselors at the comprehensive high school still think vocational education is for dummies." The teacher cited the following example:

> A counselor pulled two girls out my sewing class two years in a row. She felt they were too smart, would be attending college, and needed to take a foreign language. As it turns out, the girls married immediately after high school and could have used the training. I feel that counselors who are sympathetic towards vocational education are needed in comprehensive high schools.

Another teacher at that site stated that:

> Area vocational schools are looked down on (sic). Students are sent to a school like this because counselors feel they can't do the work at the other schools. When you get a lot of problem students, placement rates are hurt.

An administrator expressed what appeared to be the prevailing impression of most administrators interviewed at the case study sites. He felt that, "many students avoid counselors because of a general perception of their ineptness in providing assistance." On the other hand, a counselor at a high placement site pointed out that:

> I think individual counseling would help get more students to the right programs. I try, when possible, to guide students into fields where there is a demand. I keep up on the current needs of the community. Most often, however, it is the vocational teachers who are left to put students in contact with employers.

Another counselor at a high placement site asserted that:

> If a student comes through the program and deserves to be placed, I can place him. A lot of them can't be placed because of their character or because they won't work.

While counselors for the most part did not have a major role in job placement of vocational education students, they did have a major role in the admission of students to vocational education programs. The information in table 3.35 indicates which individuals primarily recruited and selected students for vocational programs according to the responding vocational education directors.

TABLE 3.35

LOCUS OF RESPONSIBILITY FOR ADMITTING STUDENTS TO VOCATIONAL EDUCATION PROGRAM AS REPORTED BY DIRECTORS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Locus of Responsibility	Percent of Responses by Type of Site			
	High Placement Sites [a]		Low Placement Sites [b]	
	Recruit	Select	Recruit	Select
Advisory Council Members	0	0	4	0
Vocational Education Directors	12	12	20	8
Job Placement Specialists	4	8	4	8
Vocational Education Teachers	32	24	44	24
Guidance Counselors	48	52	16	52
No Response	4	4	12	8
Total[c]	102	100	100	100

[a] N = 25
[b] N = 25
[c] Total does not equal 100 percent due to rounding.

As indicated in table 3.35, 52 percent of the vocational education directors believed that guidance counselors had the primary role in selecting students for admission to programs. Fewer vocational education directors at low placement sites (16 percent) indicated that guidance counselors had the primary responsibility for recruiting students than at high placement sites (48 percent).

A fourth of the directors (24 percent) indicated that vocational education teachers selected the students. A higher percentage (44 percent) of directors at low placement sites felt that teachers recruited the students than at high placement sites (32 percent). It appeared that at high placement sites, a greater percentage of counselors (48 percent) than teachers (32 percent) recruited students. Conversely, at low placement sites a greater percentage of teachers (44 percent) than counselors (16 percent) recruited students. There was no difference between high and low placement sites in the percentages of job placement specialists who recruited (4 percent) and selected (8 percent) students. Few vocational education directors at high (12 percent) or low (8 percent) placement sites claimed to have primary responsibility for selection of students, although more directors at low placement sites (20 percent) were responsible for recruiting than those at high placement sites (12 percent).

The amount of influence counselors had in selecting students for admission to vocational education programs varied among the case study sites. At most sites the counselors influenced the selection of students through their recommendations based upon previous grades, scores on aptitude tests, and performance in previous classes. At one high placement site a counselor explained that:

> All ninth graders are given the GATB, and I discuss students' aptitudes with them to decide what kind of training to go into. Students at this vocational school are accepted for programs on the basis of their records. The better students are the ones that get to enroll in the vocational programs.

There was no consistant pattern of criteria for admission of students to vocational education programs at either high or low placement case study sites. At both types of sites a number of interviewees believed there was "an open door policy" while others pointed out that "creaming" takes place in certain vocational education programs. Most case study sites appeared to admit students on the basis of space available in the program along with student interest and desire to enroll. Interviewees indicated that most frequently the space available was the chief criterion for admitting students to vocational education programs. Several interviewees explained that counselors often persuade students to enroll in programs that have openings despite the students' lack of interest in the vocational area.

At the sites with few restrictions to enrollment, all of the teachers who were interviewed felt that, as one explained, "it would be good if we could interview students to determine if they are really interested in the program." A state director pointed out that a

> major factor in placement has to be related to proper screening of students. Ways have to be found to identify potential noncompleters as well as completers.

At another site an administrator stated that "fundamentally, if we have good placement into the programs we have good placement out of the programs." A counselor provided an example of how a rigorous selection process enhanced placement. The counselor said, "Welding has the highest placement because we can pick the best ones of the many students who want to be in the program."

The greatest percentage of teachers (64 percent) who responded to the mail questionnaire indicated that, "any student who wishes can enroll in a vocational education program." Data regarding the considerations for admission to vocational education programs are displayed in table 3.36.

TABLE 3.36

CONSIDERATIONS FOR ADMISSION TO VOCATIONAL EDUCATION PROGRAMS AS INDICATED BY TEACHERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Type of Site	Number of Respondents	Considerations by Percent Indicating "Yes" Grade Point Average	Personal Interview	Career Objective	Any Student Who Wishes	Other Considerations
High Placement Site	375	14	29	44	64	14
Low Job Placement Site	397	20	35	42	64	19

In the mail questionnaire teachers were instructed to indicate as many considerations for admissions as applied to the vocational education programs in their schools. It appeared from the information in table 3.36 that in the majority of cases students' desire to enroll determined their admission to programs. Career objectives, however, also influenced their admission in over 40 percent of the cases. Personal interviews and grade point averages were considered less frequently at high placement sites (29 and 14 percent) than at low placement sites (35 and 20 percent).

In summary, the findings indicate that while some counselors provided help with job placement, most did not assume responsibility for job placement for several reasons. One reason was the lack of administrative policy; another was the view held by the counselors and other school personnel that counselors were not responsible for job placement. Counselors also pointed out how their work loads prohibited sufficient dyadic or group counseling for job placement concerns. On the other hand, counselors were regarded as having a major role in admission of students to the vocational education programs. More vocational education directors at high placement sites than at low placement sites said that counselors recruit students. About half of the vocational education directors at both types of sites said that counselors selected the students for the vocational education programs. Interviewees at case study sites felt that there were both "creaming" and "open door" policies regarding student admission, while mail questionnaire respondents indicated that student choice was the most frequent criterion for admission.

Job Placement Processes

As job placement was the focus of the study, most of the findings are related to job placement processes. For the purposes of organization and analysis, this section addresses the types of job placement services provided, the school personnel who provided them, and the factors that enhanced or presented difficulties in job placement.

A number of studies have advocated that the local education agency take an active or direct role in the job placement of former vocational education students. These studies, particularly those following the passage of the Vocational Education Act of 1963, have pointed to the need for comprehensive job placement services to serve former students; for example refer to Buckingham (1973), Eninger (1968), Kaufman (1967), Meehan and Franchak (1975), Rosen (1970), Venn (1964) and Wasil (1976). The review of literature indicated that schools vary widely in the ways in which they provide job placement services and the activities they incorporate as part of those services. Lloyd (1981), in a survey focusing on quality coopertive vocational programs in five states, found that only 32 percent of the teacher-coordinators indicated their schools had any form of a placement program for students seeking full-time employment upon completion of the student's cooperative training. In 1976, Goor and Schroeder conducted a national survey of selected school districts to obtain an overview of the types and amounts of job placement services available to secondary students, graduates, and dropouts. The highlights of their survey were as follows:

Availability of Formal Job Placement Services

Of the Nation's 11,600 school districts with grades 11 and 12, 44 percent (5,161) reported formal job placement programs in fall 1976. Among the 5,161 districts with placement programs, 93 percent served enrolled students and almost two-thirds served both graduates and dropouts.

Growth of Placement Services

Of the school district job placement programs reported in 1976, 58 percent had been in existence five years or less, and 29 percent for three years or less. About a fifth of all reported programs were started during 1971, a higher proportion than in any other single year.

Type of Placement Services

Among types of placement services offered by school district programs, referral to job openings and instruction in job search techniques are almost universal (92 and 87 percent of programs, respectively). Job order taking and listing, placement follow-up, and active job solicitation were each offered by about three-fifths of the programs.

Accessibility of Services

Ninety-two percent of the programs provided their services at the school site alone or at a combination of the central school district site and local employment service location.

Staff for Placement Programs

About half (54 percent) of the districts with programs were using only their own staff; another 38 percent were operating through local employment services as well; the remainder had arrangements using local employment services only.

Users of Services

Of the districts with placement programs, about two-thirds estimated that fewer than 40 percent of their students and school leavers made use of their services each year. In fact, half of the districts reported less than 30 percent use.

Size of Districts With Programs

Larger school districts are more likely than smaller districts to have formal placement programs.

Of the sixty-two sites that participated in the mail questionnaire, thirty-four sites had offices designed to provide job placement services. Of these fourteen were high placement sites while twenty were low placement sites. In table 3.37 the data indicate the years in which the job placement offices were opened.

TABLE 3.37

OPENING YEAR OF JOB PLACEMENT OFFICES AS REPORTED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE

Type of Site	Number of Respondents	Number of Responses					
		1950-1959	1960-1969	1970-1974	1975-1980	No Response	Total
High Placement	90	1	6	5	13	65	90
Low Placement	68	1	0	21	20	26	68

As the information in table 3.37 shows, the majority of principals indicated that their placement offices were opened between 1970 and 1980. No openings prior to 1950 were reported. One high placement site office was opened in 1950 and one low placement site office was opened in 1959. Consistant with the survey by Goor and Schoreder(1976), there appeared to be a trend in opening job placement offices during the latter years of the 1970s. Although a greater number of high placement site principals responded to the mail questionniare, they reported the existance of proportionally fewer job placement offices. The 25 high placement site principals who responded to the question represented fourteen job placement offices; the forty-two low placement site principals who responded represented twenty job placement offices. There were fewer job placement offices at high placement sites than at low placement sites. A greater number of job placement offices opened more recently at low placement sites than at high placement sites.

While not all sites participating in the mail questionnaire had job placement offices as such, various combinations of job placement services were provided at the majority of the sites. The data in table 3.38 indicate which types of services were provided at the sites. As shown in table 3.38, in comparison to other types of placement services offered, information about jobs and job seeking was available most often at both high and low job placement sites. Proportionally few of the sites had clerical staff support for job placement services. Greater percentages of all types of services were reported at low placement sites than at high placement sites. About half (52 percent) of the principals representing low placement sites reported the presence of at least one designated job placement officer in contrast to about a fourth (26 percent) of the principals representing high placement sites.

TABLE 3.38

TYPES OF JOB PLACEMENT SERVICES PROVIDED AS REPORTED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE

		Percent of Affirmative Responses				
Type of Site	Number of Respondents	Designated Job Placement Officer(s)	Office Space	Clerical Staff	Information	Job-Seeking Skills Materials, etc.
High Placement Site	90	26	21	14	54	67
Low Placement Site	68	52	53	34	75	81

The results of the study suggest that the responsibility for placement was spread among more school personnel at high placement sites than at low placement sites. This finding supports the work of Altman and Morrison (1966) and Meehan and Franchak (1975) who found that when school personnel are involved in the placement process, placement programs tend to be more effective. Involvement by school personnel in the placement process increases their opportunities to exchange information and ideas and to discuss problems regarding students and the vocational education program. This plays an important role in the effective matching of students and jobs, particularly since the placement service personnel may have less frequent and less intense contact with the students than do other school personnel, specifically the vocational education teachers and the guidance counselors as reported in a study conducted by Social, Education Research and Development, Inc. (1968).

As shown in table 3.39, respondents to the mail questionnaire believed that job placement personnel were more responsible than other persons listed in the mail questionnaire for the job placement of vocational education students. In table 3.39, the data show the amount of responsibility respondents believed that they and others should have for the job placement of students.

As the percentages in table 3.39 show, the majority of the respondents believed that the school job placement service should have "very much responsibility" for placing students. With the exceptions of guidance counselors, employers, and mothers, greater percentages of the respondents at the low placement sites believed that school job placement services were more responsible for placing students than respondents at high placement sites. Conversely, the percentages indicating the belief that vocational education teachers "had very much responsibility" were high for all groups of respondents from high placement sites.

At the high placement sites, principals indicated that the teachers responsible for coordinating the cooperative education programs had the highest percentage (38 percent) of responsibility, followed by the school job placement services (32 percent) and other vocational education teachers (23 percent). A higher percentage of vocational education teachers (25 percent) at high placement sites indicated that they (vocational education teachers) should have "very much responsibility" compared to teachers at low placement sites (15 percent). Nine percent of the guidance counselors at hihg placement sites and four percent at low placement sites believed they should have "very much responsibility". A number of other mail questionnaire respondents, however, believed guidance counselors should have "very much responsibility."

In comparison to other school personnel who responded to the mail questionnaire, job placement specialists indicated that they spent the most time conducting job placement activities. Teachers, however, indicated they spent more time in job placement activities than counselors. Vocational education directors and principals spent the least amount of time of the respondent groups, although more directors spent time on job placement activities at high placement sites than at low placement sites. The data in table 3.40 indicate the percentages of time that respondents reported they spent in job placement activities.

TABLE 3.39

LOCUS AND AMOUNT OF RESPONSIBILITY FOR JOB PLACEMENT OF STUDENTS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRES

Respondents	Type of Site	Number of Respondents	Percent Indicating Very Much Responsibility						
			Vocational Education Teacher	Guidance Counselor	Cooperative Education Teacher	School Job Placement Service	Public Employment Agency	Private Employment Agency	Vocational Education Advisory Committee
Voc Ed Directors	HPS	25	48	24	40	48	20	4	12
	LPS	25	16	8	60	84	24	4	4
Principals	HPS	90	23	11	38	32	21	11	6
	LPS	68	16	6	28	47	27	10	2
Voc Ed Teachers	HPS	375	25	19	28	36	18	7	17
	LPS	697	15	11	30	40	19	7	16
Guidance Counselors	HPS	103	31	9	23	40	25	11	10
	LPS	240	19	4	24	38	24	8	8
Job Placement Specialists	HPS	2	50	0	0	50	0	0	50
	LPS	49	31	8	29	51	25	10	12
Advisory Council Members	HPS	119	23	24	19	49	32	13	5
	LPS	163	14	18	22	50	23	14	4
Employers	HPS	231	19	18	13	44	20	11	9
	LPS	357	17	14	17	36	10	6	7
Current Students	HPS	273	26	16	11	22	22	15	17
	LPS	386	22	17	19	28	17	13	13
Former Students	HPS	184	23	18	15	32	23	16	14
	LPS	265	22	15	19	36	18	16	12
Mothers	HPS	350	24	17	15	40	26	14	13
	LPS	484	24	21	17	39	22	12	17
Fathers	HPS	259	25	18	12	36	25	14	14
	LPS	317	22	20	17	38	24	18	16

TABLE 3.40

AMOUNT OF TIME SPENT IN JOB PLACEMENT ACTIVITIES AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRES

			Percent of Time					
Respondents	Type of Site	No. of Respondents	Full Time	Half Time	Quarter Time	Less Than Quarter Time	No Response	Total[a]
Vocational Education Directors	HPS	25	0	0	0	20	80	100
	LPS	25	0	4	4	0	92	100
Principals	HPS	90	0	1	3	10	85	99
	LPS	68	2	0	6	7	85	100
Vocational Education Teachers	HPS	375	5	3	7	28	58	101
	LPS	672	3	4	6	24	64	101
Guidance Counselors	HPS	103	2	1	4	20	73	100
	LPS	240	1	2	2	28	68	101
Job Placement Specialists	HPS	2	50	0	0	0	50	100
	LPS	49	27	25	14	14	20	100

[a] Total does not equal 100 percent due to rounding.

As indicated by the data in table 3.40, the majority of all respondents, with the exception of job placement specialists, did not respond to the question about time spent in job placement activities. One job placement specialist at a high placement site spent "full-time" on job placement activities, while the other did not respond. At low placement sites, the majority of the job placement specialists (52 percent) spend at least half-time on job placement activities. A higher percentage of directors (20 percent) and teachers (43 percent) at high placement sites spent some time on job placement activities compared to those respondent groups at low placement sites (8 and 37 percent). It appeared from the responses to this question that school personnel spent a very low percentage of their time on job placement activities.

More specifically, vocational education teachers who responded to the mail questionnaire indicated how many hours per week they had spent conducting various job placement activities. The data in table 3.41 show the average number of hours spent for several activities each week by the vocational education teachers who responded to the question.

TABLE 3.41

HOURS SPENT CONDUCTING SPECIFIC JOB PLACEMENT ACTIVITIES AS REPORTED BY VOCATIONAL EDUCATION TEACHERS RESPONDING TO THE MAIL QUESTIONNAIRE

	Job Placement Activity by Percent (HPS[a], LPS[b])							
Number of Hrs. Spent Per Week	Training Job-Seeking		Talking About Job Openings		Contacting Employers		Keeping Records	
	HPS	LPS	HPS	LPS	HPS	LPS	HPS	LPS
0	52	60	49	57	55	66	57	70
1	24	16	30	21	22	13	22	9
2	8	6	10	9	8	6	2	6
3	2	3	4	3	2	2	2	3
4	2	1	1	1	1	2	1	2
5	6	5	4	5	5	4	3	5
6 - 10	4	6	2	3	5	4	2	2
11 - 20	1	3	0	1	2	1	0	1
21 - 30	1	1	0	0	1	0	0	0
31 - 40	1	1	0	0	0	0	0	0

[a] N = 375
[b] N = 697

As table 3.41 displays, the majority of vocational education teachers spent zero hours conducting the job placement activities listed in the questionnaire. More teachers at high placement sites than at low placement sites indicated that they spent some amount of time per week conducting job placement activities. More teachers at both high and low placement sites spent some time talking about job openings than conducting any of the other three activities listed. Teachers at both types of sites indicated they spent the least amount of time keeping records. Very low percentages of teachers spent more than five hours per week on any job placement activity listed. The majority of those teachers who conducted job placement activities spent one hour per week for each of the four activities. It therefore appeared that the typical amount of time spent by less than half of the teachers on each of the four listed job placement activities (shown in table 3.42) was four hours a week.

The job placement services and activities provided at the sites participating in the mail questionnaires were available primarily to current students. The information in table 3.42 shows the responses of the principals to the question, "Who in your school receives job placement services?"

TABLE 3.42

RECIPIENTS OF JOB PLACEMENT SERVICES AS INDICATED BY PRINCIPALS RESPONDING TO THE MAIL QUESTIONNAIRE

Recipients of Job Placement Services	Percent of "Yes" Responses	
	High Placement Sites (a)	Low Placement Sites (b)
Current Vocational Education Students	68	75
Completers of Vocational Education Program Until First Job Found	21	37
Leavers of Vocational Education Program Until First Job Found	14	24
Former Vocational Education Students as Often as Desired	24	35
Other	17	21

(a) N = 90
(b) N = 68

As the data in table 3.42 show, all client groups at low placement sites received a greater percentage of job placement services than corresponding groups at high placement sites. Principals indicated in a previous table (table 3.41) that more job placement specialists were employed at the low placement sites (52 percent) than at high placement sites (26 percent).

The majority of interviewees at the case study sites and respondents to the mail questionnaire agreed that having a positive work attitude is the most helpful factor for a vocational education student in obtaining a job. A counselor at one case study site explained that positive attitude means "that even if a student is just minimally qualified skillwise, but his attitude indicates willingness to do the job, and to get along with others, he will be hired." A teacher described positive attitude as "keeping the unwritten rules, such as if you want a job that starts at 7:30 you get to work with your tools at 7:00." The data in table 3.43 indicate how respondents to the mail questionnaire rated six factors for helpfulness in obtaining a job.

TABLE 3.43

FACTORS THAT ARE "VERY MUCH HELP" FOR VOCATIONAL EDUCATION STUDENTS IN OBTAINING JOBS AS INDICATED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Respondent Group	Type of Site	Number of Respondents	Percent of Very Much Help Responses: Basic Educational Skills	Occupational Skills and Competencies	Human Relations Skills	Positive Work Attitude	Previous Work Experience	Involvement of Employer with School
Vocational Education Director	HP	25	64	80	40	76	24	40
	LP	25	60	80	60	80	20	36
Principal	HP	90	54	47	42	70	18	24
	LP	68	62	56	35	68	15	22
Vocational Education Teachers	HP	375	56	65	53	75	30	39
	LP	697	57	61	47	68	23	32
Guidance Counselors	HP	103	68	58	41	67	19	30
	LP	240	58	53	37	55	18	22
Job Placement Specialist	HP	2	100	100	50	100	50	50
	LP	49	57	61	37	63	27	29
Advisory Council Member	HP	119	67	50	32	71	24	24
	LP	163	64	58	33	75	20	29
Current Student	HP	273	69	68	65	74	35	35
	LP	386	72	61	62	70	39	23
Former Student	HP	184	64	65	59	71	46	30
	LP	265	72	65	60	69	37	27
Mother	HP	350	74	63	58	68	31	30
	LP	484	79	65	61	72	31	34
Father	HP	259	73	63	58	70	34	35
	LP	317	77	56	59	65	30	33

As the percentages in table 3.43 show, there was agreement, for the most part, between respondent groups from high placement sites and respondents from low placement sites regarding the relative helpfulness of the factors for obtaining employment. There was, however, far less agreement between school personnel as a group and students and parents as a group. The ratings of advisory council members appeared to reflect the ratings of the respondents. The following table indicates the rank order of factors that respondents considered "very much help" for obtaining a job.

TABLE 3.44

RANK ORDER OF FACTORS THAT ARE "VERY MUCH HELP"
FOR VOCATIONAL EDUCATION STUDENTS IN OBTAINING A JOB
AS INDICATED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Factors	Ranking By			
	All Respondents	School Personnel	Advisory Council Members	Students and Parents
Positive Work Attitutdes	1	1	1	2
Basic Education Skills	2	3	2	1
Occupational Skills and Competencies	3	2	3	3
Human Relations Skills	4	4	4	4
Involvement of Employees with School	5	5	5	6
Previous Work Experience	5	6	6	5

In contrast to school personnel, students and parents indicated, as the data in table 3.44 show, that basic education skills were more helpful than positive work attitudes and that previous work experience was more helpful than involvement of employers with the school. School personnel indicated that having occupational skills is more helpful than basic education skills. Students and parents from low placement sites indicated that having basic education skills was the most helpful factor, as compared to students and parents from high placement sites who

TABLE 3.45
FACTORS CONSIDERED HAVING VERY MUCH IMPORTANCE FOR DECISIONS TO HIRE A PERSON FOR AN ENTRY-LEVEL JOB BY EMPLOYERS WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Factors for Decision To Hire	Percent of Very Much Importance Responses	
	High Placement Sites (a)	Low Placement Sites (b)
Work attitude	73	80
Ability to get along with people	53	61
Job interview performance	32	33
High school attendance	26	32
Health (physical)	25	27
Specific types of occupational skills	20	18
Personal recommendations	17	17
Types of previous work experience	16	15
Vocational education experience	9	10
Amount of previous work experience	10	8
High school grade records	7	9
Scores on company-administered tests	6	6
Other (Specified by Employer)	7	5

(a) N = 231
(b) N = 357

indicated that a positive work attitude was most helpful. High placement site students and parents appeared to agree with school personnel and advisory council members that having a positive work attitude was the most helpful factor for obtaining employment.

Employers were not asked to respond to the question that provided the data for the previous two tables. Instead, employers were asked to rate the importance of selected factors in their decisions to employ a person for an entry-level job. The information in table 3.45 lists the factors along with the percentages of employers who perceived that factor as having "very much importance". (Employers were not limited in the number of factors that could indicate "very much importance".)

As the data in table 3.45 show, the greatest percentage of employers from high and low placement sites indicated that work attitude has "very much importance" in their decisions to hire a person for an entry-level job. This finding concurs with the data in table 3.43 which show that the majority of respondents felt that having a positive work attitude was "very much help" for vocational education students in obtaining a job. At the case study sites, the majority of employers interviewed indicated that the most important factor for hiring employees was their attitude toward work (e.g., being on time, doing what was required, and knowing how to interact). The second highest percentage of employers considered the ability to get along with people as having "very much importance". The lowest percentage of employers felt that high school grade records and scores or company-administered tests has "very much importance" as hiring criteria for entry-level jobs. Although the factors listed in table 3.45 are not entirely synonymous with the factors in table 3.43, it appears that employers and other respondent groups did not agree about the relative importance of human relations skills and occupational skills. Employers indicated that having human relations skills seemed more important than having specific occupational skills. Conversely, the ten mail questionnaire respondent groups indicated that having occupational skills was more important than human relations skills.

Most interviewees at the case study sites emphatically pointed out that the major deterrent to high job placement was the lack of entry-level jobs in the local community. One interviewee's remark summarized what others also said, that " there must be jobs if there is to be higher placement!" Respondents to the mail questionnaire agreed with the case study interviewees. All respondents to the mail questionnaires were asked to indicate which factors pose the most difficulty when vocational education students attempt to obtain jobs. The data in table 3.46 display the percentages of respondents who indicated that selected factors pose "very much difficulty" when vocational education students attempt to obtain jobs.

TABLE 3.46

FACTORS THAT POSE VERY MUCH DIFFICULTY WHEN VOCATIONAL EDUCATION GRADUATES ATTEMPT TO OBTAIN JOBS AS PERCEIVED BY RESPONDENTS TO THE MAIL QUESTIONNAIRES

			Percent of Very Much Difficulty Responses											
Respondents	Type of Site	Number of Respondents	Students Acquired Too Specific Job Skills	Students Do Not Have Specific Job Skills	Students Must Compete with Experienced Workers	Students Unwilling to Move for a Job	No Jobs Available	Age Discrimination	Sex Discrimination	Race/Ethnic Background Discrimination	Union Restrictions on Hiring	Entry Jobs Offer only Minimum Wage	Lack of Transportation to Jobs	Lack of High School Diploma
Voc Ed Directors	HPS	25	4	20	20	10	32	0	0	0	8	8	0	20
	LPS	25	0	0	8	8	12	4	0	4	0	4	0	16
Principals	HPS	90	1	9	[illegible]	14	22	3	1	2	2	3	2	[illegible]
	LPS	68	0	6	[illegible]	13	28	4	3	3	7	6	2	22
Voc Ed Teachers	HPS	375	1	13	[illegible]	16	24	8	2	4	4	8	8	15
	LPS	695	1	13	[illegible]	13	20	7	2	5	5	11	11	15
Guidance Counselors	HPS	103	0	16	16	18	38	6	3	4	5	7	3	16
	LPS	240	1	10	22	11	27	5	3	6	5	6	9	16
Job Placement Specialists	HPS	2	0	0	0	50	0	30	0	0	0	0	0	0
	LPS	49	0	16	20	18	24	6	2	8	6	8	12	22
Advisory Council Members	HPS	119	5	10	26	15	[illegible]	6	5	5	8	10	10	19
	LPS	163	2	11	21	10	41	6	3	3	11	7	8	25
Employers	HPS	231	4	15	20	13	30	4	3	3	5	9	7	15
	LPS	357	4	12	16	8	33	5	1	3	7	9	15	17
Current Students	HPS	273	7	26	34	23	57	33	21	20	13	17	22	38
	LPS	386	5	23	30	17	51	27	20	18	11	14	20	44
Former Students	HPS	184	9	24	39	17	57	22	13	11	12	24	14	38
	LPS	265	5	19	28	16	52	21	15	14	10	21	13	36
Mothers	HPS	350	6	21	35	17	53	23	12	13	14	18	16	39
	LPS	484	7	24	34	16	51	22	11	14	13	19	21	46
Fathers	HPS	259	8	26	35	19	50	21	13	8	16	18	12	40
	LPS	317	10	26	30	18	49	1	11	12	14	15	14	43

As the data in table 3.46 reveal, the factor "no jobs available" received the greatest percentage of "very much difficulty" responses. There appeared to be a consensus among respondents that the lack of available jobs posed the greatest difficulty for vocational education graduates when seeking employment. Greater percentages of students and parents felt that the lack of available jobs posed "very much difficulty" than did school personnel and employers.

The rank order of factors posing difficulty for vocational education graduates finding a job is shown in table 3.46. The combined rank ordering of all respondent groups indicates that the lack of available jobs, the lack of high school diplomas, and competition with older workers posed the most difficulty for vocational education graduates attempting to obtain jobs. School personnel appeared to disagree with students, parents, and employers about the relative difficulty posed by not having specific skills. In comparison to school personnel, the latter groups appeared to believe that the lack of specific skills posed more difficulty. On the other hand, compared to students, school personnel felt that the lack of willingness to move for a job and minimum wages posed greater difficulty for finding jobs.

The greatest difference appeared between students/parents and employers in the ranking of age discrimination as a factor posing very much difficulty. Compared to employers, students/parents indicated that age discrimination posed relatively more difficulty. Employers seemed to feel that there were more union restrictions to hiring than students and parents felt existed in the labor market.

There were several differences between the rank orders of percentages for responses from high placement sites compared to responses from low placement sites. In comparison to high placement sites, low placement site respondents perceived that the lack of high school diplomas, age discrimination, and race discrimination posed greater difficulty. When compared to low placement site responses, high placement site respondents appeared to believe that minimum wages, union restrictions, and sex discrimination posed more difficulty for obtaining jobs.

In summary, job placement services were not highly visible or active at the case study sites. Respondents to the mail questionnaire indicated that there were more job placement offices at low placement sites than at high placement sites. The job placement offices at low placement sites had been established more recently, however. Whether or not there were job placement offices as such, some combination of job placement services was provided at the majority of the sites. The service offered most frequently was availablity of relevant materials and information.

TABLE 3.47

RANK ORDER OF FACTORS THAT POSE VERY MUCH DIFFICULTY WHEN VOCATIONAL EDUCATION GRADUATES ATTEMPT TO FIND JOBS AS PERCEIVED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Factors Posing Difficulty	All Respondents	High Placement Site Personnel	Low Placement Site Personnel	School Personnel	Employers and Advisory Committee Members	Students and Parents
No jobs available	1	1	1	1	1	1
Students lack high school diploma	2	3	2	3	3	2
Students must compete with older workers	3	2	3	2	2	3
Students do not have specific skills	4	4	4	6	4	4
Students unwilling to move for job	5	5	5	4	5	7
Age discrimination	6	7	6	7	9	5
Entry jobs offer only minimum wages	7	6	8	5	7	6
Lack of transportation to jobs	8	8	7	8	6	8
Union restrictions on hiring	9	9	10	9	8	11
Race/ethnic background discrimination	10	11	9	10	11	10
Sex discrimination	11	10	11	11	12	9
Students have too specific job skills	12	12	12	12	10	12

At high placement sites, the responsibility for job placement was spread among more school personnel. Over a third of the respondents to the mail questionnaire believed that job placement personnel should hold the most responsibility for the job placement of students. At high placement sites, more principals and vocational education teachers believed that teachers should hold "very much responsibility" for job placement. While job placement specialists indicated they spent more time than other school personnel conducting job placement activities, the majority of school personnel spent very little or no time conducting such activities. Teachers at high placement sites spent more such time than teachers at low placement sites. They spent most of that time talking about job openings. Current students were the primary recipients of job placement services at both high and low placement sites.

The majority of interviewees and respondents agreed that having a positive work attitude is the most helpful factor for a vocational education student in obtaining a job. Students and parents, on the other hand, felt that having "basic education" skills was more important than a positive work attitude. Employers felt that work attitude was the most impoortant factor they considered when hiring someone for an entry-level position. The consensus among interviewees and respondents was that the lack of entry-level jobs in the local community was the major deterrent to high job placement.

Follow-up Processes

O'Reilly and Asche (1979), Gray et al. (1978), and Franchak and Spirer (1978) stressed that while follow-up studies should be approached as a conscious effort to improve vocational programs, most follow-up studies are viewed only as a task undertaken to satisfy reporting requirements. In an extensive review of follow-up instruments, Gray et al. (1978) and O'Reilly and Asche (1979) found that the most common method of gathering follow-up information is the mail survey. O'Reilly and Asche (1979) arrived at the following conclusions after conducting their study of follow-up procedures in vocational education schools:

1. Systematic planning of follow-up procedures does not appear to be a universal practice. Methodological factors often seem overshadowed or ignored.

2. The quality of data generated in the follow-up surveys is uncertain due to response bias and the lack of demonstrated reliability and validity of follow-up instruments.

3. Detailed description of data collection procedures is less than common in survey reports.

4. Most survey reports focus mainly on summary statistics with little data interpretation given.

5. Follow-up studies are being conducted in all states, territories, and Canadian provinces. Also, it appeared that real efforts were being made to improve existing follow-up systems.

6. A large amount of information on follow-up studies is available, and individuals involved in follow-up are cooperative and willing to share experiences and knowledge.

7. Former vocational education students and their employers tend to have positive attitudes toward follow-up surveys and seem willing to respond to them.

8. Instances were found where follow-up information was being used to benefit vocational education programs.

Findings from the mail questionnaire and case studies appeared to confirm, as Gray et al. (1978), O'Reilly and Asche (1979) and David and Hendrickson (1979) found, that most schools conduct follow-up. The majority of the interviewees at the case study sites said that even where former student follow-up information was collected, it was not used to any great extent in making programming decisions. There were few discernable differences between high and low placement sites regarding follow-up activities. Case study sites appeared to lack systematic proce procedures for collecting, disseminating, and using follow-up information.

Most vocational education teachers reported that they had never seen follow-up-based information. One director of guidance who had access to follow-up information remarked that, "follow-up information does not filter down to teachers". At another site the placement specialist commented that follow-up results were used previously for "show and tell."

Interviewees offered several reasons to explain why results from follow-up surveys were not used. A frequently mentioned reason was the low response rate to surveys by former students. Teachers and counselors also pointed out that they believed better follow-up information was obtained from informal follow-up activities. One counselor said that the strength of informal follow-up was that he could evaluate the information about a student in light of that student's personality, school record, and performance history. Another reason offered by interviewees was that the surveys rarely asked the detailed kinds of questions that would be useful for making decisions to improve programs.

Respondents to the mail questionnaires indicated that follow-ups of former students were being conducted more frequently at low placement sites than at high placement sites. The nature of the follow-ups was not questioned, however, nor was the frequency of use of the follow-up results. Employers who responded to the mail questionnaire indicated that there were more frequent follow-ups conducted regarding students who were within their first year of work than regarding students after their first year of work. Table 3.48 shows the frequency that employers reported they were contacted about the job performance of former vocational education students.

TABLE 3.48

FREQUENCY THAT SCHOOLS FOLLOW UP
JOB PERFORMANCE OF FORMER VOCATIONAL EDUCATION STUDENTS
AS REPORTED BY EMPLOYERS RESPONDING TO THE MAIL QUESTIONNAIRE

Frequency	Percent of Employers Indicating Frequency(HPS[a],LPS[b])			
	During Students' First Year of Work		After Students' First Year of Work	
	High Placement Site	Low Placement Site	High Placement Site	Low Placement Site
Once a month	13	12	1	2
Four times a year	17	25	6	10
Twice a year	9	12	6	5
Once a year	9	10	10	8
Never	34	26	25	26
Other	7	6	5	6
No response	12	[illegible]	49	44

[a] N = 231
[b] N = 357

As the information in table 3.48 shows, employers reported that they were contacted more frequently at low placement sites than at high placement sites. Almost half (46 percent) of the employers at high placement sites either did not respond or were never contacted within the students' first year of work compared to a third (35 percent) of the low placement site employers. Employers at both types of sites were contacted less frequently after the students' first year of employment. Nearly one-half

(48 percent) of the high placement site employers indicated they had been contacted at least once a year within the students' first year, while 23 percent indicated they had been contacted at least once a year after the first year of employment. Low placement site employers reported they had been contacted more frequently, indicating 59 and 25 percent respectively. There appeared to be a trend towards less follow-up after the first year of employment at both high and low placement sites. Vocational education directors who responded to the mail questionnaire indicated that they conducted follow-ups more frequently than the employers appeared to believe they were contacted for follow-ups of completers and noncompleters.

TABLE 3.49

FREQUENCY THAT SCHOOLS FOLLOW-UP FORMER VOCATIONAL EDUCATION STUDENTS AS REPORTED BY VOCATIONAL EDUCATION DIRECTORS RESPONDING TO THE MAIL QUESTIONNAIRE

	Percent of Directors Indicating Frequency (HPS[a],LPS[b])			
Frequency	Follow Up of Completers of Vocational Education Programs		Follow up of Non-Completers of Vocational Education Programs	
	HPS	LPS	HPS	LPS
Once a month	13	12	1	2
Four times a year	17	25	6	10
Twice a year	9	12	6	5
Once a year	9	10	10	8
Never	34	26	25	26
Other	7	6	5	6
No response	12	9	49	44

[a] High Placement Sites, N = 231
[b] Low Placement Sites, N = 357

As the data in table 3.49 show, follow-ups of completers of vocational education programs occurred more frequently than follow-ups of noncompleters. As previously indicated by the employers responses, follow-ups were conducted more frequently at low placement sites compared to high placement sites. All sites represented by the responding directors conducted follow-ups of completers, while it appeared that none were conducted at 24 percent of the high placement sites and at 16 percent of the low placement sites. The greatest percentage of follow-ups were conducted at yearly intervals.

More than half of the school personnel who responded to the mail questionnaire indicated they did not spend any time on former student follow-up activities. The information in table 3.50 indicates the number of hours respondents reported that they spent conducting follow-up activities.

TABLE 3.50

NUMBER OF HOURS SPENT CONDUCTING FOLLOW-UP OF FORMER STUDENTS AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Respondents	Type of Site	Number of Respondents	Percent Indicating Number of Hours Spent				
			1 Hour	2-5 Hours	6-10 Hours	30 Hours	No Response
Voc Ed	HPS	375	25	8	1	0	67
Teachers	LPS	697	12	6	2	0	80
Guidance	HPS	103	18	3	0	0	79
Counselors	LPS	240	5	2	0	0	92
Job	HPS	2	0	50	0	0	50
Placement Specialists	LPS	49	22	31	4	2	41

As the data in table 3.50 show, job placement specialists spent the most time conducting job placement activities. Teachers and guidance counselors at high placement sites spent more time on follow-up activities than their counterparts at low placement sites. These data appear to conflict with the information reported previously that low placement sites conduct follow-ups more frequently. This data appears to indicate that frequency of follow-up activities did not necessarily indicate the amount of time spent in conducting various types of follow-up activities. Case study site interviewees pointed out that they had more confidence in the information provided through informal follow-ups of former students. Several interviewees explained that informal follow-ups were conducted on an ongoing basis rather than at a point-in-time, as is typically done with a mail or telephone survey.

In summary, findings from the mail questionnaires and case studies were consistent with information in the literature regarding follow-up studies. It appears that most schools conducted follow-ups primarily through mail surveys but did not use the results to any great extent. There was little difference between high and low placement sites in the procedures and frequency of conducting follow-ups or in the use of the resulting information.

Curriculum

Finch and Crunkilton (1979) stressed that vocational education curriculum should be developed while keeping three factors in mind. First, vocational curriculum has traditionally been developed in a haphazard manner with little attention given to the human development process. Second, vocational curriculum soon becomes outdated if steps are not taken to keep it from remaining static. Third, vocational curriculum thrives on relevance. Based on these considerations, Finch and Crunkilton maintained that vocational curriculum should be data-based, dynamic, associated with explicit outcomes, fully articulated with other educational activities throughout the secondary and postsecondary levels, realistic, student-oriented, evaluation-conscious, and future-oriented.

TABLE 3.51

FREQUENCY OF CURRICULUM REVISION AS REPORTED BY DIRECTORS RESPONDING TO THE MAIL QUESTIONNAIRE

Type of Site	Percent of Directors (HPS[a], LPS[b])						
	Yearly	Every 2 Yrs.	Every 3 Yrs.	Every 5 Yrs.	Never	No Response	Total
High Placement Sites[a]	48	20	12	16	0	4	100
Low Placement Sites[a]	24	12	28	28	4	4	100

[a] N HPS = 25
[b] N LPS = 25

In the mail questionnaire, vocational education directors were asked to rate the frequency with which their school systems revise vocational education curriculum. The data in table 3.51 show the frequency of curriculum revision reported by vocational education directors. For the high placement sites, 48 percent of the directors who responded said that their schools' curriculum was updated annually, as compared with 24 percent of the low placement site directors. Sixteen percent of the high placement directors stated that updating was conducted every five years, while 28 percent of the low placement directors indicated that they revised curriculum every five years.

The process of developing curriculum was somewhat unique at each case study site, although an advisory council was used to some extent at each site. At several of the case study sites there was a reliance on needs assessment surveys in the curriculum development process.

The majority of interviewees at the case study sites reported that teachers were primarily responsible for curriculum development. A high placement site director of vocational education stated that, "teachers are responsible for keeping abreast of changes in industry work requirements. They adjust their curricula accordingly." Typically, teachers organized and developed the curriculum together, revised it after consultation with the advisory council, and submitted it to the administration for official approval. There were differences in the procedures among the case study sites. For example, at one low placement site teams of teachers developed curriculum for the whole school district, while at one high placement site curriculum packages were primarily adopted from outside sources.

Curriculum revision appeared to present problems according to the interviewees at the case study sites. Each site appeared to have different mechanisms to deal with updating the curriculum. Most sites had established a mandated curriculum review every three to five years. In addition, recommendations from advisory council members and former students were regarded as an indication that curriculum changes were needed. Student follow-up data were rarely mentioned as a source of information for curriculum revision.

The vocational education curriculum was reviewed and updated more frequently at high placement case study sites. Advisory council members at high placement sites reported that they assisted vocational education staff in identifying job tasks and skills performed by workers more frequently than council members at low placement sites. It appeared that when advisory council members were knowledgeable about the types of skills required by entry level employment and when their knowledge was actively sought by school administrators, placement rates were influenced positively.

In summary, it appeared that the curriculum was updated more frequently at high placement sites than at low placement sites. A predominant input for curriculum revision came from advisory committee input. Needs assessments were also frequently used for revisions according to the mail questionnaire respondents. At the case study sites, curriculum revision appeared to be done sporadically, without extensive planning or use of input from advisory committees or needs assessments.

Teachers were primarily responsible for curriculum revisions and development, although the processes varied among the case study and mail questionnaire sites.

Instructional Processes

Observations at the case study sites and the review of literature indicate there are two generally accepted modes of teaching vocational education, classroom training and on-the-job training. Classroom training is an integral part of almost all vocational education programs. Students are provided a broad background in theory in order to perform well in a real job situation. On-the-job training stresses practical job and work skills acquired through real world-of-work situations. Numerous authors and practitioners have reported that class size, availability of equipment and facilities, and instructional techniques affect vocational classroom training.

The issue of how class size affects student achievement has been debated for decades and the results of studies addressing the issue have not been conclusive. Opinion surveys reveal that teachers and the general public believe that large class size negatively affects student learning. Moreover, Glass and Smith (1978), using meta-analysis techniques, argued that as class size increases pupil achievement decreases.

In order to prepare a vocational education student for employment in the real world, adequate equipment and facilities are necessary for training. With rapid technological advances in industry, increased pressure is placed on vocational educators to maintain equipment comparable to that used in the field (Bottoms 1980). In testimony before the U.S. House of Representatives Subcommittee on Elementary, Secondary, and Vocational Education, Bottoms (1980) pointed out that as efforts are made to revitalize American industry, the nation's vocational and technical laboratories must be revitalized also. If efforts are not made to upgrade vocational facilities and equipment, Bottoms stated, vocational education will become increasingly out of tune with American industry. There was no apparent difference however, between high and low placement case study sites in the amount or quality of facilities or equipment available. At some sites there was a wide variety of up-to-date equipment provided in a spacious facility, while at other sites inadequate amounts and types of equipment were housed in inadequate buildings.

Overall, insufficient research has been done on methods of instruction used in the vocational education classroom. Three major methods that are described in the literature are individualized instruction, programmed instruction, and competency-based education. While it is apparent that a variety of classroom instructional methods are available to vocational educators, their impact upon job placement is unknown.

At the case study sites, the amount of time students spent in vocational education programs varied from one period per day to one-half of each day. Students who left their home school daily to attend a vocational education school typically spent half of the day in vocational education classes. This pattern seemed to hold for high and low placement sites.

The instructional process at high and low placement sites generally included organized instruction to provide concepts and background to be followed with individual or small group practical application of the knowledge. Individualized, performance-based instruction was not fully implemented in any of the case study sites. An assistant principal at one of the sites indicated that, "slower students tend to drop out of the vocational education programs because they don't receive enough individualized instruction." "Teachers," the principal explained, "tend to ignore the slower students and spend more time with the brighter ones." However, several teachers described their program as being performance based and individualized. There appeared to be little difference between the instructional process used.

According to the literature, the second general mode of instruction in vocational education, on-the-job training, is usually provided in one of two ways: (1) cooperative education programs and (2) work study programs. Cooperative education was defined in the Vocational Education Amendments of 1968 as:

> A program of vocational education for persons who, through a cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in schools with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability (U.S. Public Law 90-576, 1976).

In contrast, Lewis et al. (1976) defined a work study program as:

> A program which serves students who may or may not be enrolled in the school's vocational curriculum. Participants are frequently placed in jobs which are

not directly related to their fields of study, and the programs are often designed mainly to deter dropouts (p. 16).

The majority of case study interviewees felt that cooperative work programs had a positive effect upon job placement. Three of the four high placement case study sites offered cooperative work programs, while all four low placement sites offered such programs. The programs varied (i.e. admission procedures, the grade level of participants, necessary prerequisites) from site to site as well as between program areas within the schools. There did not appear to be any notable differences in the operational procedures of the programs between high and low placement sites.

The majority of case study interviewees were positive regarding the effectiveness of cooperative programs. Several interviewees at the high placement site which did not have a cooperative work program believed that a cooperative program would increase their current placement rate. Most parents, teachers, current students, former students, employers, and administrators were also supportive of the cooperative education programs at their sites. As one parent explained, "the work experience gained by my son in the cooperative program will enhance his job placement opportunities." The majority of the parents felt that their children learned a lot about the adult working world in the cooperative education programs.

Employers frequently discussed the benefits that participation in cooperative education offered their businesses. One employer said the "kids work hard and learn a lot" and do a good job for him. Another mentioned that cooperative work placements provide him with an opportunity to "size-up" prospective employees before hiring them full-time. Employers also pointed out the tax advantages associated with the hiring of cooperative education students as benefits. In addition, it was apparent that many employers felt a sense of civic pride in helping to educate youth for the world of work. The major criticism of cooperative education programs expressed by employers centered around communications with instructors. Several employers, especially at low placement sites, felt that they needed more contact with teachers in order to provide better opportuntities to students. These results are supported by Lloyd (1981) who found that successful characteristics of a cooperative education training sponsor include:

- One who meets frequently (four to seven times per year) with the teacher-coordinator to discuss the cooperative program and to evaluate those students who are participants of the cooperative program.

- One who will commit to hiring of students on a full-time basis after students conclude their cooperative training experiences. The study indicated that 72 percent of the training sponsors had hired former cooperative education students on a full-time basis. Further, students were hired for jobs related to their training (p. 13[illegible]).

In summary, two pri[illegible] of teaching vocational education are classroom training [illegible]-the-job training. Classroom training provides students [illegible] a theoretical background while on-the-job training provides practical experience in a real-job setting. Classroom training was more oriented towards individualized performance-based instruction at some sites compared with others, but no consistant pattern emerged as representative of high of low job placement sites. Cooperative education was offered at all but one case study site. Interviewees at the site without cooperative education frequently discussed how the addition of such a program would enhance vocational education at their site. The majority of interviewees were very positive about cooperative education, pointing out how it enhanced understanding of vocational skills and provided opportunities for employment. While most employers extolled the benefits of participation in cooperative education programs, a few pointed out that lack of frequent communication with teachers decreased the possible benefits to the participating students.

Student Organizations

According to several authors (Bottoms 1980, Reel, 1980, Mitchell 1977), participation in youth organizations provides an integral and highly beneficial component of the vocational education process. Lloyd (1980) found that one of the components of the ideal cooperative vocational education program was a strong vocational youth organization committed to developing and enhancing the student's leadership ability. Based on information in the literature, it could be expected that sites having high placement rates would also have greater rates of student participation in various youth organizations than do those sites with low placement rates.

Former students responding to the mail questionnaires from the high placement sites reported more participation in youth organizations than former students from low placement sites. As indicated in table 3.52, sites with higher job placement rates had a greater proportion of student membership in youth organizations. Almost a third (28 percent) of the students at high placement sites belonged to VICA compared to 9 percent at low placement sites. Membership in FFA and FHA/HERO was also greater 14 and 14 percent) compared to low placement sites (4 and 9 percent). The frequency of participation in youth organizations was

At two of the case study sites (one high, one low placement), participation in student organizations was synonomous with enrollment in related vocational education programs. At the majority of the case study sites, membership in vocational education program youth organizations was considered highly desirable but was not mandatory. At one low placement case study site, youth organizations were definitely not encouraged.

Both current and former students who belonged to youth organizations expressed very positive opinions concerning their clubs. Former students frequently attributed their employment achievements to the training that they had received as participating youth organization members. This training included participation in public speaking, parliamentary procedure activities, and employability skill contests.

For the most part teachers were supportive of youth organizations, though they expressed some reservations. One teacher explained that youth organizations often overemphasize "competition and competency-based contests that ultimately end in the presentation of trophies." A supervisor of vocational education programs commented that "frequently youth organizations placed greater demands upon students' time and energy for extracurricular activities than was required for academic subjects".

In summary, a greater percentage of former students responding to the mail questionnaire belonged to vocational education youth organizations at high placement sites than at low placement sites. Furthermore, compared to low placement sites, former students from high placement sites appeared to participate more frequently in youth organization activities. At the case study sites, the majority of the interviewees were positive about participation in youth organizations. Students felt participation provided them with valuable employment related experiences. Although in the minority, some school personnel expressed concern that the competitive aspects of youth organizations detracted from the benifits derived from participation.

Staff Characteristics

A third (33 percent) of the respondents to the mail questionnaire were school personnel. Of these, 12 percent represented high placement sites and 21 percent represented low placement sites. The majority of the responding school personnel indicated they were white, male, over thirty-five years old and had attained some education beyond the baccalaureate degree. Data from the case study sites indicated a similar demographic profile of school personnel.

The distribution by ethnic origin of school personnel responding to the mail questionnaire is displayed in table 3.9. As discussed previously, more high placement site respondents than low placement site respondents indicated they were of nonwhite origin. There were greater percentages of whites at low placement sites for the five school personnel respondent groups. Almost all (96 percent) of the directors at low placement sites indicated they were white, as compared to 84 percent at high placement sites. Similarly, 93 percent of the principals were white at low placement sites, as compared to 79 percent at high placement sites. The differences in percentages were not as great for vocational education teachers (81 and 87 percent) and for guidance counselors (77 and 84 percent).

Over two-thirds (71 percent) of the school personnel indicated they were males. The information in table 3.54 shows the distribution by sex of the school personnel who responded to the mail questionnaire.

TABLE 3.54

DISTRIBUTION BY SEX OF SCHOOL PERSONNEL
WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Respondents	Type of Site	Number of Respondents	Percent Indicating Sex: Male	Female	No Response	Total
Vocational Education Directors	HPS	25	100	0	0	100
	LPS	25	88	12	0	100
Principals	HPS	90	87	11	2	100
	LPS	68	87	13	0	100
Vocational Education Teachers	HPS	375	53	45	2	100
	LPS	697	52	47	1	100
Guidance Counselors	HPS	103	44	53	3	100
	LPS	240	48	48	4	100
Job Placement Specialists	HPS	2	100	0	0	100
	LPS	49	43	47	10	100

As shown by the data in table 3.54, all directors at high placement sites and 88 percent at low placement sites indicated they were males. More (87 and 87 percent) of the principals at both high and low placement sites were male. While a slightly higher percentage of male vocational education teachers and guidance counselors responded at both types of sites, more female job placement specialists responded from low placement sites.

The greatest percentages of school personnel indicated they were at least thirty-five years old. In table 3.55 the data indicate the distribution of ages as reported by respondents to the mail questionnaire.

TABLE 3.55

DISTRIBUTION BY AGE OF SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE

			Percent of Responses						
Respondents	Type of Site	Number of Respondents	20-29 Years	30-39 Years	40-49 Years	50-64 Years	65 and Above	No Response	Total[a]
Vocational Education Director	HP	25	0	20	36	28	16	0	100
	LP	25	0	12	16	68	0	4	100
Principal	HP	90	1	29	38	30	1	1	99
	LP	68	2	25	35	35	2	2	101
Vocational Education Teacher	HP	375	12	39	27	21	0	2	101
	LP	697	8	31	25	31	1	4	100
Guidance Counselor	HP	103	1	28	34	29	2	7	101
	LP	240	4	32	27	27	2	9	101
Job Placement Specialist	HP	2	0	0	100	0	0	0	100
	LP	49	2	20	35	27	12	4	100

[a] Total does not equal 100 percent due to rounding.

As the data in table 3.55 show, a higher percentage (56 percent) of responding vocational education directors at high placement sites were younger (less than fifty years old) than their counterparts at low placement sites (28 percent). More than half (52 percent) of the high placement site directors were between thirty-five and forty-one years of age while 56 percent of the low placement site directors were between fifty and fifty nine years old. There was not as much variance in the ages of principals at high and low placement sites. Principals at high placement sites tended to be somewhat younger, although the percentages were similar for both types of sites.

Vocational education teachers also were younger at high placement sites, with one-half (50 percent) under forty years of age compared to 39 percent at low placement sites. A third (33 percent) of the vocational education teachers were over fifty years of age at low placement sites, compared to 21 percent at the high placement sites. In contrast, guidance counselors appeared to be somewhat older at high placement sites. Almost two-thirds (65 percent) of the guidance counselors at high placement sites were above the age of forty compared to 55 percent at low placement sites. The majority (55 percent) of the job placement specialists from low placement sites were under fifty years of age.

The majority of the vocational education directors and principals indicated that they had had education beyond the master's degree. The data in table 3.56 indicate the highest level of education attained by school personnel who responded to the mail questionnaire.

The data in table 3.56 show that for the most part, school personnel at high placement sites held higher degrees than their counterparts at low placement sites. More principals (10 and 12 percent) held a doctorate than vocational education directors (4 and 8 percent). With the exception of vocational education teachers, all school personnel indicated they had received a baccalaureate degree. Similar percentages (16 and 15 percent) of vocational education teachers reported their highest level of education completed as high school or one to three years of college.

With the exception of job placement specialists, the majority of the school personnel who responded to the mail questionnaire indicated they had had previous work experiences related to their present positions. In table 3.57 the data show the number of years of related work experience reported by school personnel.

As indicated in table 3.57, the majority (60 and 54 percent) of vocational education teachers had had at least one to ten years of related work experience. High placement site teachers appeared to have somewhat fewer years of related work experience than teachers at low placement sites. There were no outstanding differences between high and low placement site school personnel in the number of years spent in their present positions. The data regarding the number of years school personnel had held their present jobs are shown in table 3.58.

TABLE 3.56

HIGHEST LEVEL OF EDUCATION ATTAINED BY SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE

	Percent of Responses									
Highest Level of Education	Vocational Education Directors		Principals		Vocational Education Teachers		Guidance Counselors		Job Placement Specialists	
	HPS (a)	LPS (b)	HPS (c)	LPS (d)	HPS (e)	LPS (f)	HPS (g)	LPS (h)	HPS (i)	LPS (j)
Completed High School	0	0	0	0	3	4	0	0	0	0
1-3 Years College	0	0	0	0	12	11	0	0	0	0
4 Years College	0	0	0	9	14	13	24	25	0	8
4 Years College +	4	0	4	4	23	23	0	2	50	25
Master's Degree	16	36	17	15	19	23	19	19	0	12
Master's Degree +	76	48	62	56	23	23	36	33	0	14
Doctorate	4	8	10	12	1	1	1	2	0	2
Other	0	4	7	4	2	2	1	2	50	16
No Response	0	4	1	0	1	1	19	18	0	22
Totals	100	100	101	100	99	101	100	101	100	99

NOTE: Totals do not equal 100 percent due to rounding

(a) N = 25
(b) N = 25
(c) N = 90
(d) N = 68
(e) N = 375
(f) N = 697
(g) N = 103
(h) N = 240
(i) N = 2
(j) N = 49

TABLE 3.57

YEARS SPENT IN WORK EXPERIENCES RELATED TO PRESENT POSITION AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Respondent	Type of Site	No. of Respondents	Percent of Responses							
			0 Yrs.	1-5 Yrs.	6-10 Yrs.	11-15 Yrs.	16-20 Yrs.	More Than 20 Yrs.	No Response	Total
Vocational Education Director	HPS	25	4	16	24	12	0	24	20	100
	LPS	25	0	28	16	32	4	8	12	100
Principal	HPS	90	14	18	23	16	13	9	7	100
	LPS	68	13	25	16	16	6	12	12	100
Vocational Education Teacher	HPS	375	8	36	24	11	7	10	5	101
	LPS	697	6	34	20	9	8	16	8	101
Guidance Counselor	HPS	103	16	29	19	9	6	7	15	101
	LPS	240	14	20	20	11	11	7	18	101
Job Placement Specialist	HPS	2	100	0	0	0	0	0	0	100
	LPS	49	100	0	0	0	0	0	0	100

NOTE: Totals do not equal 100 percent due to rounding.

As shown by the information in table 3.58, the majority of the school staff had held their present positions between one and ten years. Greater percentages of school personnel at high placement sites had had no experience teaching vocational education. The data in table 3.59 show the number of years school personnel reported they had been teaching vocational education.

As indicated in table 3.59, a lower percentage (54 percent) of vocational education teachers at high placement sites had had six to twenty years of teaching experience, compared to teachers at low placement sites (60 percent). Similarly, fewer vocational education directors (44 percent) at high placement sites had had six to twenty years of teaching experience, compared to directors at low placement sites (54 percent). In contrast, a greater percentage (21 percent) of high placement site principals than low placement site princpals (11) had had six to twenty years of teaching experience. Principals from high placement sites, however, indicated a greater percentage (21 percent) of no years of experience compared to 12 percent of the low placement site principals.

TABLE 3.58

YEARS SPENT IN PRESENT POSITION AS REPORTED BY SCHOOL PERSONNEL WHO RESPONDED TO THE MAIL QUESTIONNAIRE

Respondent	Type of Site	No. of Respondents	Percent of Responses							
			0 Yrs.	1-5 Yrs.	6-10 Yrs.	11-15 Yrs.	16-20 Yrs.	More Than 20 Yrs.	No Response	Total*
Vocational Education Directors	HPS	25	-	36	36	12	16	-	-	100
	LPS	25	-	36	40	20	4	-	-	100
Principals	HPS	90	6	47	25	20	3	-	-	101
	LPS	68	2	40	27	24	2	2	2	99
Vocational Education Teachers	HPS	375	4	43	30	16	3	5	>1	101
	LPS	697	3	39	30	19	6	5	>1	101
Guidance Counselors	HPS	103	4	38	27	20	7	3	1	100
	LPS	240	5	37	31	18	6	2	2	101
Job Placement Specialists	HPS	2	-	100	-	-	-	-	-	100
	LPS	49	11	20	59	4	2	-	2	101

* Totals do not equal 100 percent due to rounding.

In summary, findings from the mail questionnaire and the case studies indicate that school personnel were predominantly white, male, over thirty-five years old, and had attained education beyond the baccalaureate degree. More high placement respondents to the mail questionnaire indicated they were of nonwhite origin than school personnel at low placement sites. Administrators and teachers at high placement sites tended to be younger than their counterparts at low placement sites. School personnel at high placement sites tended to hold higher degrees than personnel at low placement sites. Vocational education teachers from high placement sites had somewhat fewer years of related work experience than teachers at low placement sites. The majority of the school personnel had held their present positions between one and ten years.

TABLE 3.59

YEARS OF EXPERIENCE TEACHING VOCATIONAL EDUCATION AS REPORTED BY RESPONDENTS TO THE MAIL QUESTIONNAIRE

Respondent Group	Type of Site	No. of Respondents	Percent of Responses							
			0 Yrs.	1-5 Yrs.	6-10 Yrs.	11-15 Yrs.	16-20 Yrs.	More Than 20 Yrs.	No Response	Total*
Vocational Education Directors	HPS	25	-	16	16	28	-	24	16	100
	LPS	25	-	8	28	36	20	4	4	100
Principals	HPS	90	21	9	10	11	1	-	48	100
	LPS	68	12	9	6	5	3	-	66	101
Vocational Education Teachers	HPS	375	2	35	30	24	-	7	1	99
	LPS	697	2	27	32	28	8	1	2	100
Guidance Counselors	HPS	103	24	14	4	4	1	-	52	99
	LPS	240	19	6	6	2	1	-	66	100
Job Placement Specialists	HPS	2	-	-	50	50	-	-	-	100
	LPS	49	63	6	25	6	-	-	-	100

* Totals do not equal 100 percent due to rounding.

Student Characteristics

As shown by the information in table 3.60, the majority of the current and former students responding to the mail questionnaire were female.

In a previous table (table 3.9) the data indicate that former and current student respondents to the mail questionnaire were predominantly white. Proportionally more former students than current students at both the high and low placement sites responded to the mail questionnaire. At the high placement sites, 82 percent of the former students were white, compared to 78 percent of the current students. At the low placement sites 81 percent of the former students were white, compared to 72 percent of the current students.

TABLE 3.60

SEX CHARACTERISTICS OF CURRENT AND FORMER STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRE

Sites	Percent of Students					
	Current Students[a]			Former Students[b]		
	Males	Females	No Response	Males	Females	No Response
High Placement Sites	43	56	1	46	54	1
Low Placement Sites	35	62	3	39	58	3

[a] N HPS = 273,
N LOW = 386

[b] N HPS = 184,
N LOW = 265

Current and former students reported that their grade point averages were higher for vocational education courses than for all their courses. The data in table 3.61 indicate that this relationship was constant, regardless of the type of site.

As the data indicate in table 3.61, students from the low placement sites reported that their average grades were higher for both vocational education courses and all courses than the grades reported by the high placement site students.

Generally, currrent and former students believed that high school graduates with two years of vocational training had a better chance of getting a job than high school graduates with two years of experience and no vocational training. The data in table 3.62 show how students believed their opportunities for employment were changed as a result of participation in vocational education programs.

TABLE 3.61

DISTRIBUTION OF GRADE POINT AVERAGE FOR ALL COURSES AS REPORTED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRE

Grade Point Average	Type of Courses	Percent of Students			
		High Placement Sites		Low Placement Sites	
		Current Students (a)	Former Students (b)	Current Students (c)	Former Students (d)
Out-standing	All	7	5	7	11
	VocEd	19	18	18	21
Above Average	All	37	36	41	44
	VocEd	47	41	48	54
Average	All	54	55	48	37
	VocEd	31	38	28	19
Below Average	All	1	2	2	2
	VocEd	1	1	1	0
Failing	All	-	-	-	-
	VocEd	0	0	0	0
No Response	All	2	2	3	5
	VocEd	2	3	5	7

(a) N = 273
(b) N = 184
(c) N = 386
(d) N = 265

As shown by the data in table 3.62, current students from both types of sites were more optimistic than former students about the chances for employment of a high school graduate with two years of vocational education to a worker with two years of experience and no vocational education. Students from high placement sites were apparently neither more nor less optimistic about employment opportunities than students from low placement sites.

TABLE 3.62

HOW A HIGH SCHOOL GRADUATE WITH TWO YEARS OF VOCATIONAL EDUCATION COMPARES WITH A WORKER WITH TWO YEARS OF WORK EXPERIENCE AND NO VOCATIONAL EDUCATION WHEN APPLYING FOR THE SAME JOB AS INDICATED BY STUDENTS RESPONDING TO THE MAIL QUESTIONNAIRE

Vocational education graduates' chances of getting the job are:	Percent of Students			
	High Placement Sites		Low Placement Sites	
	Current Students(a)	Former Students(b)	Current Students(c)	Former Students(d)
Much Better	22	11	19	8
Better	28	22	28	23
Some Better	25	25	30	31
Worse	14	27	8	20
Much Worse	2	5	2	4
Don't Know	9	7	10	7
No Response	>1	3	4	6
Totals*	101	100	101	99

(a) N = 273
(b) N = 184
(c) N = 386
(d) N = 265
* Totals do not equal 100 percent due to rounding.

In summary, current and former students from both high and low placement site who responded to the mail questionnaire were predominantly white and female. The ratio of white to minority students was disproportionately larger for former students than for current ones. Students reported that the averages of their grades were higher for vocational education courses than for all their school programs. Current students were more optimistic than former students about the chances for employment of a high school graduate with two years of vocational education compared to a worker with two years of experience and no vocational education.

Additional Analysis of Existing Data

In this section additional information is provided about the analysis of existing data. The findings presented in this section did not logically fit into the preceding findings presentation, which was organized around issue areas.

Selected Variable Sets

This model allowed for the inclusion of variables (refer to Chapter 1, research question 3) based upon their priority ranking assigned by the National Center staff and contributions to the overall regression analysis. These pages show variables rated most important along with the variable codes utilized. This analysis was completed in the same manner as the analysis of economic variables. The full model had an R^2 of .379 ($P < .01$). The correlation matrix in table A.7 lists the relationships among the variables. The reduced model is presented in table A.8. Variables included in the reduced model are significant at the .05 level. In developing the model, the first (and most important) variable to be included was the percent of unemployment. As unemployment rates decreased, the percent of placement increased.

The second variable to be tested was metropolitan or rural/local. Metro was defined as a Standard Metropolitan Statistical Area (SMSA) and was coded "0". Rural was designated as a-l other areas and was coded "1". It was found that this variable had a low correlation with the criterion variable and a moderate correlation with the percent of unemployment, educational level, and percent of work force variables. It was therefore excluded from the reduced model.

The third variable to be analyzed was the percent of population change. This variable was not related to the percent of placement and had moderate to low correlations with the percent of males in the work force and was therefore excluded from the reduced model.

The fourth set of variables inspected for inclusion in the reduced model was the median education level of males and the median education level of females. Both variables had low to moderate correlations to the percent of placement and a high intercorrelation. The median education level of males variable was dropped from the reduced model, and median education level of females was retained because of its overall greater contribution to R^2.

The fifth set of variables inspected for inclusion was the percent of population that was white non-Hispanic and percent of population other than white non-Hispanic. Both variables had a low to moderate correlation with placement and were highly related with each other. The percent of population white non-Hispanic variable was retained in the reduced model, and the percent of population other than white non-Hispanic was dropped from the model.

The sixth set of variables inspected for inclusion into the model was the percent of work force male, percent of the work force female, percent of the work force that was male age eighteen to nineteen, and percent of the work force that was female age eighteen to nineteen. The first three varibles had a lower correlation coefficient than the fourth (percent of the work force that was female age eighteen to nineteen) and therefore were dropped from the regression analysis.

The last variable inspected for inclusion was highway mile density. This variable correlated moderately with percent of placement and was retained in the model.

Table A.8 provides a reduced model accounting for 36.7 percent of the variability in the percent of related job placement for secondary vocational education students. The variables that contributed significantly had the following relationships:

1. As the unemployment rate goes up, the percent of placement drops.

2. As the median education level of the female population gets higher, placement rate drops. (The same is true for the male education level.)

3. As the percent of population white non-Hispanic increases, placement rate increases.

4. As the percent of the work force that is female aged eighteen to nineteen increases, the percent of placement decreases.

5. As highway density increases, the percent of related job placement decreases.

These relationships were consistent with those in correlational analysis. (Research Question 1 in Chapter 1).

Unemployment rate had a strong relationship with placement rate. This relationship was consistent across state and LEA analyses. The relationship between the median education level of females in the population and the related placement rate may have indicated higher occupational aspiration to acquire additional formal education.

The relationship between the percentage of whites in the population and placement rate could have been affected by the relationship among percent of whites in the population, median education level and per capita income.

As the percentage of the labor force of eighteen to nineteen year olds increased placement rate dropped. One might project that the labor force utilized a fixed proportion of young workers; and when this portion of the labor force was saturated, employment for secondary vocational education graduates may have been more difficult to find.

Highway density was a measure of economic and social development and therefore related to community size population density. The analysis has yielded several size-related variables indicating that in general the larger the population base served, the lower the placement.

Education

Table A.9 provides a list of education variable codes and variable descriptions. Table A.10 presents the means, standard deviations, and intercorrelations for the educational variables. Of the nineteen educational variables in the full model (R^2 = .342; P = .01), four are included in the reduced model (table A.11). It should be noted that the number of complete cases was reduced from 586 to 248. This was due to missing data for guidance and job development services and percent of youth organization variables. This reduction of cases has drastically changed some of the mean values for the variables. One might wish to refer to the Correlation Matrix (table A.10) to inspect the consistency of the findings for this analysis. The following variables were eliminated from the reduced model due to a low correlation with the criterion variable:

a. Total number of students completing vocational education programs
b. Percent of students enrolled in distributive education
c. Percent of students enrolled in health occupations
d. Percent of students enrolled in home economics
e. Percent of students enrolled in T & I and technical programs
f. Percent of white vocational education students
g. Percent of nonwhite vocational education students
h. Number of other vocational education schools in the area
i. Number of students enrolled in the LEAs

Variables dropped because of collinearity with other independent variables were:

a. Percent of dropouts
b. Percent of whites in the LEA
c. Percent of nonwhites in the LEA

The remaining variables were included in the reduced model.

Guidance and job development services appeared to be related to percent of placement. The LEAs with guidance and job development services available, have lower related placement rate. This variable may be invalid because of inaccurate and incomplete data. The second variable in the reduced model is percent of students enrolled in agriculture. It would appear that for every 10 percent increase in enrollment in agriculture, there is a 1 percent decrease in the placement ratio. The third variable to be included in the reduced model is percent of enrollment in business and office programs. The relationship indicates that as enrollment in business and office programs increases by 20 percent, placement rate increases by 1 percent. The last variable to be included in the reduced model is percent of students enrolled in youth organizations. This data indicates that as the percentage of students in youth organizations increases, the placement rate increases.

A limitation of this analysis is that the number of cases included in the analysis has been reduced to 248 due to the absence of data regarding guidance and job development services and vocational youth organizations in several states. By reducing the number of cases in the analysis, the average placement rate dropped from approximately 28 percent to 15.6 percent. This indicates that those states providing information on guidance and job development services and vocational youth organization membership have a lower placement rate than the states that did not provide this information.

The negative relationship between guidance and job development services has been implemented in programs where placement rates were initially low. If this is the case, these services may not have caused or produced low placement rates but are only treatments implemented because of low placement rates. It appears appropriate to reexamine the operational definition of guidance and job development services and to further study their impact.

Enrollment in agricultural and business and office programs is an indicator of program size. In other words, as enrollment increases in either of these programs, the total size of the vocational education program increases. There is also a relationship to the size of the school. Because the number of program completers and placement rates are also functions of enrollment (in that placement rate is calculated using completers), the contribution to placement rate variability by enrollment could be a function of the numbers utilized in developing the placement percentage.

Percent of students participating in youth organizations relates positively to the percent of placement. When a higher percentage of students in a program belong to youth organizations, the placement rate is higher. This relationship could exist due to the fact that teachers involved with programs having high percentages of students enrolled in youth organizations could also have the tendency to promote placement for their students. It would appear reasonable that students would become involved in youth organizations when teachers show a concern for them.

General Analysis

The final regression analysis included all variables showing significance in each of the three categories (economic, social-demographic, and education). A setwise elimination was completed to inspect the independence of the variable groupings. The full model for this analysis had an $R^2 = .358$ ($P< .01$). By removing the economic variable, R^2 was reduced to .348. By removing the social-demographic variable, the R^2 was reduced to .296. By removing the educational variable, the R^2 was reduced to .313. This analysis indicates a high degree of interdependence among the sets of variables.

The correlation matrix in table A.12 supported this conclusion. The two weakest variables were per capita income and the percent of students enrolled in vocational agriculture programs.

The reduced model (table A.13) consisted of four variables. Each variable is independent from the others and appeared to represent its major grouping in the reduced model.

1. Percent of students enrolled in business and office education relates with other educational variables.
2. Highway density relates to other size of community variables.
3. Unemployment rate relates to other economic variables.
4. Percent of the total population that is white relates to other population descriptors.

Research Question 4

The intent of Research Question 4 was to inspect several interaction effects among independent variables and the percent of placement. The generic question this analysis intended to address was this:

To what extent does the following variable set explain variance in related job placement of secondary vocational vocational education graduates?

a. Number of new industrial starts and percent of vocational students in secondary schools

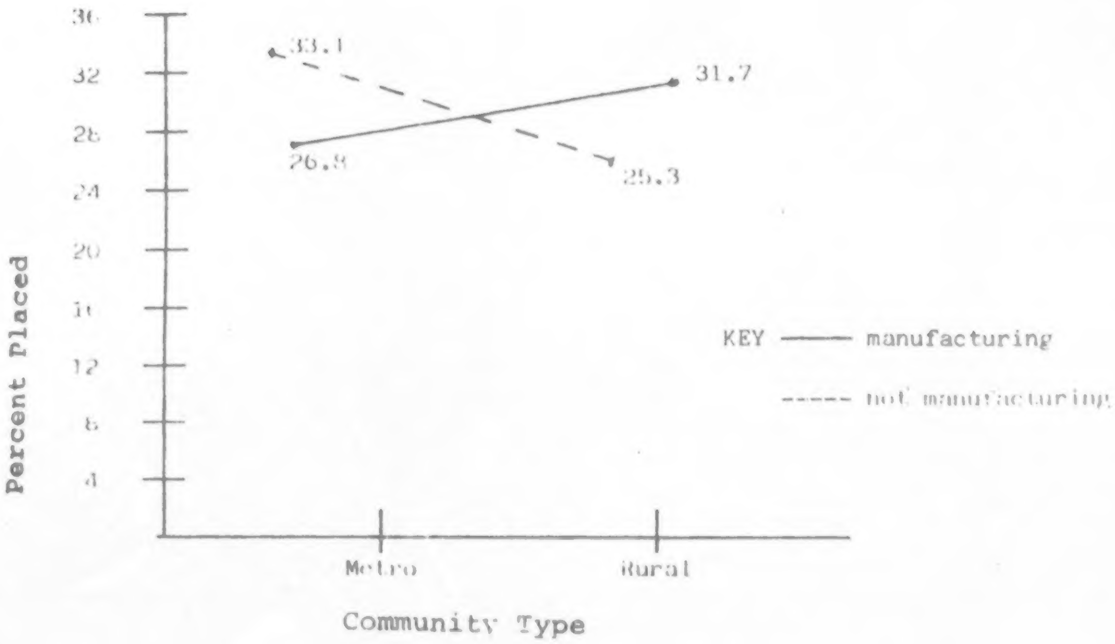
b. Educational level and minority composition of the population

c. Major industrial types and rural/urban settings

d. Unemployment rate and minority composition of the population

FIGURE 3.1

LEA - INTERACTION BETWEEN MANUFACTURING AS A MAJOR INDUSTRY AND METRO-RURAL LOCATION



These relationships were analyzed utilizing a two-way analysis of variance model. In order to do this, the independent variables were categorized into equal interval groups. Table A.14 provides the reader with the recode information necessary for interpreting the results. Of the four interactions tested, the only significant relationships were between industrial type manufacturing and metro-rural location when looking at percent of placement as a criterion variable. Tables A.15 and A.16 provide the means, standard deviation, and summary table for this analysis. Figure A.1 further graphically interprets the disordinal interaction: Placement was higher in rural counties where manufacturing was the major industry and lower in metropolitan areas where manufacturing was the major industry. This may have been because manufacturing in rural areas was more visible than it was in many metropolitan areas. The rural industries may have been easier to approach. There may also have been some interrelation with membership in labor unions. Other interaction may have been evident with further inspection of the data.

Summary of findings and implications from the analysis of existing data. The study was exploratory in nature and therefore, implications of the data were presented as the data were analyzed. There was no attempt to infer causal relationships. The following are some of the findings and implications from the study.

Figure 3.2 lists the variables having significant relationships with percent of related placement of secondary vocational education graduates. Other research studies are needed to adequately interpret the meaning of the identified relationships.

In summary, six major classes of variables that relate to percent of placement of vocational education students are discussed: (1) employment, (2) size of the community, (3) educational level, (4) extent of change taking place in the community, (5) enrollment makeup of the vocational education program, and (6) vocational education program services and activities. Some reasons for these relationships have been suggested. It should be understood that many other reasons may be generated in an effort to explain each identified relationship.

Suggested explanations for some relationships include the following:

1. Unemployment rate may effect the related placement of secondary vocational education students because vocational education graduates compete with all other youth in the labor market for the same jobs. Data to support this interpretation are findings that--

a. when unemployment is high, placement is low;

b. as the percent of workers eighteen to nineteen years ofage increases, placement decreases, indicating that if the jobs traditionally available to this age group are filled, placement of vocational graduates becomes more difficult, regardless of their having employable skills;

c. as employment is easier to obtain, other students are enticed to drop out of school for employment, thereby competing for jobs that vocational education graduates might get. If this is true, there are implications about how employers view the quality of secondary vocational education programs. A question to be asked is to what extent does having completed a secondary vocational education program provide graduates with an advantage when competing for jobs against students not completing a secondary vocational training course.

2. Community size may impact upon placement of secondary vocational education students. Teachers in schools in larger communities may not be familiar with the community's businesses, or the business leaders in larger communities may not be familiar with the vocational education program.

   The data indicate that size of the community, in general, relates negatively to vocational placement rate. Little is know about why this relationship exists.

   The positive relationship between size of industry in the community and placement rate could inciate that vocational education is not serving the bigger industries. (Communitites with more smaller industries had higher related placement of vocational education graduates.) Larger industries may have their own training programs or recruit employees from other labor pools.

3. The negative relationship between median education level of the community and percent of related placement may indicate that students in vocational programs where median education of the community is higher, make career decisions such as continuing on in school or going to work in a nonrelated job. These students may have more alternatives than students from communities with lower median education level.

FIGURE 3.2

SUMMARY - VARIABLES HAVING SIGNIFICANT RELATIONSHIP WITH PERCENT OF RELATED JOB PLACEMENTS FOR SECONDARY VOCATIONAL EDUCATION STUDENTS

Variable	Type of Variable	Can be Influenced	Direction of Relationship	Importance 1=least 5=most
Guidance & job development services	Educational	Yes	Neg.	4.2
Labor demand	Economic	No	Pos.	4.2
Percent unemployment	Social	No	Neg.	3.9
Percent change in population	Social	No	Pos.	3.3
Industrial mix (size)	Economic	No	Pos.	3.2
Percent enrolled in business and office programs	Educational	Yes	Pos.	3.2
Percent enrollment in agriculture program	Educational	Yes	Neg.	3.2
Median educational level	Social	No	Neg.	3.1
Percent disadvantaged	Education	Yes	Pos.	2.9
Percent whites enrolled in VE	Educational	Yes	Neg.	2.9
Percent population white	Social	No	Pos.	2.7
Per capital income	Economic	No	Neg.	2.6
Highway density	Social	No	Neg.	2.5
Percent total work force female, 18-19	Social	No	Neg.	2.5
Number of white students	Educational	No	Pos.	1.9

4. There are several variables that indicate more successful placement rates for programs in economically and socially stable communities. This may also indicate stability of the vocational education programs. Placement might be easier to achieve in the stable environment where businesses are more aware of the vocational education programs as potential labor sources and better communication exists among teachers and business leaders. Also, in areas of rapid economic growth, students may take jobs not related to their training because of better wages.

5) The fifth set of variables that impact on vocational placement is the make-up of the student enrollment in vocational education programs. It appears that vocational education serves the nonwhite and disadvantaged student best. This could be because these students need to go to work upon completion of the program, while the more affluent students have other options. This may have implications for better career counseling and screening methods before enrolling students in vocational education programs.

6) The sixth set of variables to impact upon related placement is vocational education services and activities. Guidance and job development services relate negatively to percent of related job placement. This condition could be due to the criterion used to implement job development and career guidance services. Transitional services may not have caused low placement rates but are only treatments implemented because of low placement rates.

   Percentage of students in youth organizations did have a positive impact on placement. It could be that teachers who develop large youth organizations also have the interpersonal skills and energy necessary to develop job placement for ther graduates, or that by belonging to youth organizations one becomes more social, therefore finds it easier to interview for a job.

As in any exploratory study, there are more data presented than can be interpreted. The interpretations given here are for the most part based on intuitive postulations. These are only a few of the implications one might draw from the analyses. Further work needs to be done before strong statements can be made pertaining to the findings and implications of this study.

Further analysis of the data base used for this study should include the following considerations. Each state's data need to be independently in order to improve the consistency of the information studied. There are problems with inconsistent definitions and missing data for some of the variables. Specific theories and hypotheses should be developed from (1) case studies and (2) further inspection of the analyses. These theories should then be tested. Case studies should be implemented to explore why the identified relationships exist.

A second analysis should be considered once the 1980 Census data is published. This would minimize the different reference points for the data; that is, all data would be for 1980.

This phase of the study is one step in identifying correlates to placement; much work remains before concrete statements can be made concerning what affects related job placement for secondary vocational education students.

Additional Results From the Analysis of Mail Questionnaires

In this section additional information is provided about the analysis of existing data. The findings presented in this section did not logically fit into the major body of the findings presentation which was organized around issue areas.

Regression Analysis

Separate regression analyses were done for the following respondent groups:

1. Directors and principals (administrative staff)
2. teacher, counselors, and job placement specialists (faculty)
3. Current students
4. Former students
5. Parents
6. Vocational education advisory council members
7. Employers of former students

Table 3.6 provides a description of the respondent groups by high and low placement sites and number of individuals included in the original analysis of data. As discussed previously the unit of analysis was the LEA. Therefore, for each independent variable used in the analysis of the mail quesitonnaire data set, a mean was calculated based upon the responses of the various groups comprising the sample of each LEA.

Findings of this analysis of the mail questionnaire data are reported as they pertain to the following study objective:

> To provide a detailed description of the educational **and community processes** which appear to influence

former vocational education students being placed in jobs related to their training.

The statistical data are presented in tables and are discussed in this section only to the extent needed to interpret the meaning of the statistics used. Certain results were discussed in previous sections of this chapter. However, impressions, conclusions, and recommendations for further study are presented in a later section.

Before addressing the objective discussed earlier and its subsequent research questions, tables of descriptive statistical data are presented in order to aid the reader in developing the necessary background information concerning the mail survey independent variables used in this phase of the data analysis. Tables A.17 to A.26 found in Appendix E list the correlations ($p > .05$), the means and standard deviations for each variable by respondent groups, and the number of LEAs used in the analysis.

Testing the differences between the high and low placement sites for each of the variables using a conventional t-test was discussed in an earlier section of this chapter. These variables were selected from the review of literature, the correlational analysis of existing data, and the case studies, because they were expected to differentiate between the high and low placement sites.

Parents. Results from the regression analysis using the respondent group of parents between fourteen independent variables and the dependent variable (job placement in related field) are presented in table A.27. The total multiple correlation (R) obtained from this analysis was equal to .68. The unadjusted coefficient of determination was equal to .46. Adjusting the coefficient of determination for degrees of freedom accounted for the shrinkage which would be expected upon cross-validation. The coefficient of determination adjusted for degrees of freedom (R^{-2}) was approximately equal to .31.

The significance of the total relationship was tested by dividing the mean squares regression by the mean squares error to obtain an F-ratio with K and $n = 1$ degrees of freedom. The overall F-ratio for this equation was 3.061 and was significant beyond the .05 level.

The standardized Beta represented the amount of units of the independent variable which was uniquely associated with the percent of job placement, with the effect of all of the other independent variables partialled out. Because the measurement units of various independent variables in a number of cases were not comparable, standardized (Beta) coefficients were used. Ezekiel and Fox (1967) state that for comparisons between problems where the standard deviations are much different, the Beta coefficient may have value.

The significance of the Beta was tested with an F statistic which should be generally at least 4. Weisberg and Bowen (1980) state that this rule of thumb is actually very close for regressions with at least sixty cases. They add that if a coefficient is not significantly different from zero, then that variable can be safely dropped from the regression.

Following this procedure, the variables on the responsibilty of the cooperative education coordinator in helping students find jobs were tested. The difficulty that "no jobs available" posed for the former students in locating employment, and the parental expectation for the student after high school are significant at the .01 level. While the other variables did not in themselves possess enough of a unique contribution to be statistically significant, all fourteen independent variables taken together accounted for approximately 31 percent of the dependent variable (percent of job placement in related field). This 31 percent was obtained from the adjusted coefficient of determination (R^{-2}).

Former students. A regression analysis between sixteen independent variables and the dependent variable (the percent of job placement in related field) is presented in table A.28. The total multiple correlation (R) obtained from this analysis was equal to approximately .85. The unadjusted coefficient of determination (R^2) was equal to approximately .73. Adjusting the coefficient of determination for degrees of freedom accounted for the shrinkage which could be expected upon cross-validation. The coefficient of determination adjusted for degrees of freedom (R^2) was equal to approximately .63. The significance of the total relationship tested by the overall F-ratio is equal to 7.42 and is significant beyond the .01 level. Examination of the standardized regression coefficients in this model indicated that only the following variables were significant beyond the .01 level: previous work experience, training in job readiness skills (e.g., resume writing), the goal of placement not related to training (i.e., the extent that this is perceived as a low-ranking goal of the school, the higher the placement in related field), the difficulty the lack of transportation plays in obtaining a job, the importance of basic education skills, the presence of age discrimination as a deterrent to obtaining a job, holding a job while in school, and student membership in VICA. One independent variable, the school placement services as a source of information, was significant at the .05 level.

Current student. The regression analysis between the nineteen independent variables and the dependent variable (percent of job placement in related field of training) was presented in table A.29. The total multiple correlation (R) is equal to approximately .86. The unadjusted coefficient of determination (R^2) was approximately equal to .73, and the adjusted coefficient of determination (R^{-2}) was equal to approximately .62. The significance of the total relationship as tested by the F-ratio was equal to 6.6170 and was significant beyond the .01 level. The standardized regression coefficients revealed that three independent variables (the difficulty the lack of transportation poses in obtaining a job, the rating of the school placement service as a source of information about job openings, and the help vocational education teachers provide in learning about jobs) were significant beyond the .01 level. These variables can be considered as significant predictors of percent of job placement in related field of training in the presence of all other variables.

Teachers, counselors, job placement specialists. The results from the regression analysis of the full model between twenty-two independent variables and the dependent variable (job placement in related field) using the faculty respondent groups (teachers, counselors, job placement specialists) are presented in table A.30. The multiple correlation (R) obtained from this analysis was approximately equal to .64. Adjusting the coefficient of determination for degrees of freedom accounted for the shrinkage which would be expected upon cross-validation. The coefficient of determination adjusted for degrees of freedom (R^{-2}) was equal to approximately .43.

The significance of the total relationship was tested by the overall F-ratio is equal to 3.085 and is significant beyond the .01 level. Examination of the standardized regression coefficients indicates that the only significant variable contributing to the prediction of job placement in related field was the belief by the teachers, counselors, and job placement specialists of the difficulty former vocational students had in obtaining jobs when no jobs were available.

Advisory council members. Table A.31 presents the results of step wise multiple regression techniques as used in the previous analysis in order to identify the most unique and useful information for prediction. The total multiple correlation (R) was approximately equal to .64, the unadjusted coefficient of determination (R-2) was equal to approximately .17, and the significance of the total relationship as tested by the overall F-ratio was approximately equal to 1.683 (which is not significant at either the .01 or .05 levels). In examining the standardized regression coefficients in model 2, independent variables were significant (.05) predictors of job placement in related field. These included the ranking of the goal of "creating an awareness of jobs" and the goal of "providing students with competencies needed to obtain jobs."

Directors and principals. The multiple regression analysis between the twelve independent variables and the dependent variable (percent of job placement in related field) is presented in table A.32. The total multiple correlation (R) was equal to approximately .53 and the unadjusted coefficient of determination (R^2) was equal to .28. The adjusted coefficient of determination (R^{-2}) was equal to approximately .09. The F-ratio for the overall relationship was 1.481 and was not significant at the .05 level. Examination of the standardized regression coefficients in this model indicates that none of the variables were significant at the .05 level.

Employer. The regression analysis between fifteen independent variables and the dependent variable, percent of job placement in related field of training, was presented in table A.33. The total multiple correlation (R) was approximately equal to .72, and the unadjusted coefficient of determination (R^2) was approximately equal to .35. The adjusted R^{-2} was equal to approximately .35. The significance of the toal relationship as tested by the overall F-ratio was equal to 3.110, and was significant beyond the .01 level. Three independent variables significant at the .05 level, included: the goal of placement in related field of training, the difficulty sex discrimination poses in job placement, and the difficulty age discrimination possesses in finding a job.

Discriminant analysis. A discriminant analysis was used to differentiate between the high placement sites (thirty LEAs) and the low placement sites (thirty-two LEAs). The designation of high and low was based on the United States and individual state departments of labor estimates of the 1978 annual average adjusted civilian labor force, or unemployment rate, for the particular labor market area designation in which the LEA existed.

To distinguish between the high and low placement sites, variables were classified under economic, social-demographic, and educational categories. The iteration or data reduction techniques discussed earlier included a heuristic framework, a review of literature, discussions with a group of consultants familiar with the school-to-work transition, preliminary analysis of data using correlational techniques on existing data bases, and information obtained from the case studies. The analysis of those data provided the data basis for the design of the discriminant analysis study.

In the following presentation of discriminant analysis by seven respondent groups, (1) teachers; job placement specialists; counselors; (2) directors, principals; (3) current students; (4) former students; (5) parents; (6) advisory council members; and (7) employers; attention was focused on the contributions of the individual variables describing the relative importance of a variable in determining the discriminant score.

Analysis of respondent groups. To determine a combined discriminant strength of the selected independent variables in maximizing the total differences between the high and low placement groups, the discriminant functional analysis was undertaken. This technique attempted to maximize the ratio of between-group sum of squares to within-group sum of squares. The results of this analysis were presented by respondent groups.

Table A.36 presents the results of discriminant function analysis for the respondent group of teachers, counselors, and job placement specialists. The information contained in six independent variables was sufficient to produce a significant discrimination. The Wilkes Lambda statistic was computed and tested using the Chi Square. It can be seen that the Chi Square was equal to 39.989, which was significant at the 0.0000 level. The eigenvalue presented in the table was not of immediate value in this analysis because the variables were combined into one function. However, in subsequent analysis it would be important when deriving three functions to include a function describing the classification of variables as economic, social-demographic, and educational. The resulting eigenvalues would be compared to determine the relative magnitudes to see how much of the total discriminatory power each has. The derived value of the canonical correlation (r^*) was equal to approximately .71. This correlation squared (r^{*2}) defined the proportion of variation in the discriminant function explained by the groups. The r^{*2} equaled .50, which indicated that a substantial relationship existed between the high and low placement groups and the discriminant function.

Table A.37 presents the results of the second discriminant function analysis which was conducted for the respondent group of directors and principals. Stepwise selection procedures resulted in a subset of three variables being derived from the full set. The Wilkes Lambda statistic was equal to approximately .79, and the Chi Square was equal to 12.785 and was significant at the 0.0000 level.

Examining the canonical correlation (r^*), the value was equal to approximately .46. The correlation squared (R^{*2}) was equal to approximately .21, which showed that a slight relationship existed between the high and low placement groups and the discriminant function. The discriminant function also correctly classified 63.79 percent of the cases. The tau statistic was equal to .47, which indicated that the classification based on the discriminating variables made 47 percent fewer errors than would be expected by chance alone.

The respondent group of current students was the subject of analysis in the third discriminant function analysis. In table A.38 eleven variables were used in this analysis. The Wilkes Lambda statistic was equal to approximately .45. The test of significance using Chi Square resulted in a statistic equal to approximately 41.262, which was significiant at the .0000 level. A violation in one of the assumptions was identified. The group covariance matrices, were not equal, which would tend to distort the canonical discriminant functions and classification equation (Klecka, 1980). Klecka (1980), however, added that the analysis can be performed but caution must be exercised in interpreting the results. Alternative procedures would be suggested to minimize certain shortcomings. Examining the results of the canonical correlation (R*) the value computed was .74. The correlation squared (R^2) was equal to approximately .55, which shows that a marked relationship exists between the high and low placement groups and the discriminant function.

It can be seen that 91.53 percent of the cases were correctly classified between the high and low placement groups. The tau statistic was equal to .71, which indicated that the classification based on the discriminating variables made 47 percent fewer errors than would be expected by chance alone. The fourth discriminant function analysis involved the identification of ten variables used to discriminate between the high and low placement sites based on the respondent group of former students (table A.39). The Wilkes Lambda statistic was equal to approximately .36, and Chi Square equal to approximately 50.638, which was significant at the 0.000 level. The canonical correlation (r*) equaled approximately .80. The correlation squared (r^{*2}) was equal to approximately .64, which showed a substantial relationship exists between the high and low placement groups and the discriminant function.

The discriminant function also correctly classifed 92.98 percent of the cases. The tau statistic was equal to .87 which indicated that the classification based on the discriminant variables made 87 percent fewer errors than would be expected by random selection.

The parents comprised the respondent group for identifying variables in the next discriminant function analysis. Table A.40 shows results of the analysis. The Wilkes Lambda statistic was equal to approximately .74. The Chi Square test of significance was equal to approximately 16.570 and was significant at .0110 level. The canonical correlation (R*) was equal to .50, and the correlation squared (R^{*2}) was equal to .26, which showed a low relationship existed between the high and low placement groups and the discriminant function. It was shown that 75.41 percent of the cases were correctly classified. The tau statistic was equal to .60 indicating that the classification based on the discriminant variable made 60 percent fewer errors than would be expected by chance alone. Table A.41 presented the information concerning the discriminant analysis based upon the respondent group of local vocational education advisory council members. The Wilkes Lambda statistic was equal to approximately .65. The Chi Square test of significance was equal to 18.702 and was signficant at the .0022 level. Reviewing the results of the canonical correlation (R*), the value computed was equal to approximately .59. The correlation squared (R^{*2}) was equal to approximately .35, indicating that a low relationship exists between the high and low placement groups and this discriminant function. The discriminant function correctly classified as much as 79.17 percent of the cases. The tau statistic was equal to .66, which indicated that the classification based on the discriminating variables made 66 percent fewer errors than would be expected by chance alone.

The final discriminant analysis dealing with a separate respondent group focused on information from employers of former vocational education students. Table A.42 shows eight variables comprising the set for this discriminant function. The Wilkes Lambda statistic was equal to approximtely .47. The Chi Square was equal to approxiamely 40.12 and was signficant at the 0.0000 level. In testing for violations of assumptions, group covariance matrices were found to be unequal. As discussed earlier, the results should be interpreted with caution. Examining the results of the canonical correlation (R*), the value computed was equal to approximately .73. The correlation squared (R^{*2}) was equal to .53. This shows a marked relationship exists between the high and low placement groups and the discriminant function. It can be seen that 89.83 of the cases were correctly classified between the high and low placement groups. The tau statistic was equal to .82, indicating that the classification based upon the discriminating variables made 82 percent fewer errors than would be expected by random selection.

General analysis. Prior to the general analyses, the statistically significant variables from each respondent group were summarized in two tables. Table A.44 centered on the results of the multiple regression results, while table A.45 focused on the multiple discriminant analysis results.

After the multiple regression analyses and multple discriminant analyses for each separate respondent group were conducted, variables common to all respondent groups and selected variables from the analysis of existing data portion of the study were combined into one common data set. Using this set, multiple regression and discriminant analyses were performed. The results of these procedures are displayed in tables A.34 and A.43.

Taken together, the two analyses supported two of the major findings from the case studies. First, the importance of economic factors in the process of job placement was highlighted. Unemployment rate emerged as significant in both analyses. Likewise, in the case studies, interviewees often stressed that lack of jobs hindered placement.

Secondly, the ratings for the goal of placement in a training related job and the helpfulness of the teacher and job placement service emerged as important in the multiple regression and multiple discriminant analyses. These results agreed with those of the case studies in which the importance of philosophy and the role of the teacher and school placement service in job placement were stressed.

Summary of Chapter III

This section presents a summary of the study findings. Sixty-two sites were represented in the study. Eight of the sites served in dual roles, first as case study sites and second as mail questionnaire sites. The dependent variable and first criterion for selection of the LEAs for the study was the percentage of students who completed their vocational education in 1978, who were known to be available for work, and who were placed in full-time, training related jobs within six months of leaving the program.

There were thirty sites with reported high job placement rates (above 54.3 percent) and thirty-two sites with reported low placement rates (below 54.3 percent). Four of the eight case study sites reported high job placement rates, while the other four reported low job placement rates. There was a wide range and distribution of job placement rates represented in the study. The rates for high placement sites ranged from 54.3 percent to 97 percent, while the rates for low placement sites ranged from 7.9 percent to 52.8 percent.

Job placement rates in this study were reported by the vocational education agencies of the seven states participating in the study. It appeared that methods for collecting and reporting job placement date differed not only between states but also among sites within the states. Interviewees at the state agencies and at the sites believed, however, that they reported the best data available for the 1977-78 period. The lack of a standardized and widely used methodology to collect job placement data must be considered a limitation of the study findings.

The second criterion for selection of the LEAs was the level of labor market demand in the community where the site was located. High labor market demand was defined as unemployment rates of 5.9 percent and below. The thirty high labor demand sites had 5.9 percent and below rates of unemployment. The remaining thirty-two sites in the study were in communities with reported unemployment rates of 6.0 percent and above and were designated as low labor market demand sites. In the mail questionnaire part of the study, the number of sites located in communities with high labor demand (48 percent) was approximately the same as those with low labor demand (52 percent). There were more case study sites (63 percent) located in communities with high labor market demand than in those with low labor market demand (37 percent).

The third criterion for selection of the sites was their location in a metropolitan or nonmetropolitan community. Metropolitan communities were those located in a Standard Metropolitan Statistical Area (SMSA) while nonmetropolitan communities were not located in SMSA. Fifty-six percent of the questionnaire sites were located in metropolitan communities while 44 percent were in nonmetropolitan communities. Seven of the eight case study sites were located in metropolitan communities, with one in a nonmetropolitan community.

Questionnaires were mailed to a total of 20,307 individuals in ten respondent groups. The total number of respondents to the mail questionnaire was 5,062 which represents 25 percent of the questionnaires mailed to sixty-two sites in seven states. Over a third (36.6 percent) of the mail questionnaire respondents represented low placement, low labor demand metropolitan sites. The majority of the case studies were in metropolitan sites with more high labor market demand (five out of eight) than low labor market demand. More than half of the mail questionnaire respondents (3,051 of 5,062) and case study interviews (233 of 438) represented low job placement sites. The directors of vocational education programs had the highest response rate with 93 percent returning their questionnaires. School staff members responded more readily (65 percent) than non-school staff individuals who received questionnaires. More advisory council members participated (45 percent) than employers, who returned 38 percent of the questionnaires. Almost half (47 percent) of the questionnaires were sent to parents, although only 15 percent responded.

Individuals were selected for interviews for the case studies primarily through the cooperation of the state and local education agency liaison persons. A total of 438 individuals were interviewed, including sixty-seven persons at the state level, 138 local school staff members, 124 students and parents, and 120 employers and community members.

Four-fifths (81 percent) of the total number of respondents to the mail questionnaires indicated their ethnic origin as white. Nearly 10 percent were black, while the remaining ten percent either indicated American Indian, Asian, Hispanic, other, or did not respond to the question. More school personnel were minorities at high placement sites than at low placement sites. There were greater percentages of white directors, principals, teachers, counselors, job placement specialists, and employers at the low placement sites than at high placement sites. Statistical analysis of the ethnic origin of the population in the questionnaire site communities was not possible due to the selective sampling based upon involvement with the vocational education program.

Interviewees at the case study site frequently mentioned that, as one employer pointed out, "parents influence their children as to which vocational education class they should take." At high placement sites parents appeared to have less education than at low placement sites. A greater percentage of fathers at high placement sites held jobs related to traditional vocational education areas than fathers at low placement sites. A greater percentage of mothers held clerical, administrative, and professional jobs at low placement sites than at high placement sites.

The mean educational level of both males and females in the population was lower at high placement sites (11.0 and 11.2) than at low placement sites (11.5 and 11.7). The negative relationship between the educational level of the population with high placement sites indicates that the higher the median level of education in the community, the lower the rate of related job placement. It can be inferred that students at low placement sites perceived a wider range of options than taking jobs related to their vocational education related fields. Students in communities with higher median educational levels appeared to make career decisions more frequently to continue their education at postsecondary schools or work in nonrelated jobs. In contrast, it appears that students in communities with lower median educational levels had fewer viable alternatives to that of remaining in their vocational education related field.

The ethnic makeup of the eight case study site communities indicated a trend towards a greater percentage of minorities at the high placement sites. The population at three of the high placement sites was 14-18 percent minorities, while the fourth site was less than 3 percent minority. In comparison, the population at the low placement sites had a lower percentage of minorities, averaging 8 percent at all but one site that had less than 1 percent minorities. The analysis of exisiting data (tables A.2 and A.3) further indicated a trend towards a positive elationship between the percentage of related placement and communities with more nonwhites in the population. It appeared that student placement in related jobs is higher in communities with greater percentages of minorities comprising the population.

Analysis of the existing data from the 586 local education agencies indicated trends and statistical relationships among a number of variables. The mean LEA enrollment was lower in high job placement communities (8,478) than in low placement communities (16,778). Proportionally fewer whites were enrolled in the schools, more students were enrolled in vocational education programs, and more students were in youth organizations at the high job placement communities. The mean of the dropout rate was 7.1 at high placement sites compared to 5.7 at low placement sites. The higher the percentage dropouts, the higher the job placement rates.

The analysis of existing data indicated that as the number of vocational education programs increased, the percentage of placement increased. There was a positive relationship between the number of vocational education programs made available to students and the percent of placement rate. Growth in vocational education programs affected student placement negatively, and programs that provided guidance and job development services appeared to have a lower percentage of placement.

All of the placement rates among service areas were significantly related, which indicated that schools with high placement rates in one program area tended to have higher placement rates in other program areas. As the number of programs in agriculture, distributive education, health, and trade and industrial/technical increased, the placement rate increased. It appears that agricultural programs had higher placement in rural areas and distributive education (D.E.) programs had higher placement in metropolitan areas. In addition, the unemployment rate related negatively to percent of placement for health occupations, home economics, business and office, and trades and industrial/technical programs.

The percentage enrolled in youth organizations had moderately large correlations with the placement rates for all service areas, indicating that as the percentage of members in youth organizations increased, the placement rate increased. The cost of vocational programs did not have a significant relationship to placement. It appeared that more money, by itself, made little difference in placement rates.

Findings from all components of the study indicated that the communities with high labor market demand also tended to have higher job placement rates. Investigation at the case study sites revealed that while the average labor demand rate was an indicator for job placement opportunities in general, a number of other factors impinged upon training related job placement. Employers frequently pointed out that unemployment rates are averaged for all jobs possible in a community, and the demand for a specific training related job is frequently difficult to ascertain from the average labor demand rate for all jobs. Employers also indicated that if the demand for specific training related jobs in a community could be defined it would be a better predictor of job placement opportunities than the overall average labor market demand.

Another variable considered a factor relevant to job placement is availability of transportation. Lack of transportation emerged as a significant barrier to employment during the statistical analyses of the mail questionnaires.

There was higher job placement in sites with proportionally more small industries (having less than 250 employees) and a greater number of manufacturing firms. Low job placement sites were located in communities with more large industries, more retail firms, and fewer manufacturing firms than found in high job placement sites. Unions appeared to be a factor according to several interviewees who described both positive and negative influences that unions appeared to have upon placement of former students.

Philosophical positions relative to job placement as a goal of secondary vocational education were determined through interviews at the case study sites and through information obtained from the mail questionnaires. At both high and low placement sites, case study interviewees and mail questionnaire respondents appeared to believe that job placement was not the most important goal of the vocational education programs. The most prevalent belief appeared to be that placement in a job related to training was less important than providing students with employability skills, with an awareness of various occupations, or with the opportunity to explore various jobs.

The respondents to the mail questionnaires concurred with the case study interviewees concerning the goals of secondary vocational education programs. The greatest percentage of respondents ranked the goals for secondary vocational education in the following order:

Goal 1. To provide students with skills needed to obtain a job
Goal 2. To create awareness of various occupations
Goal 3. To provide an opportunity to explore various jobs
Goal 4. To placement students in jobs related to training
Goal 5. To place students in jobs not necessarily related to training

The consensus among interviewees was, as a school administrator stated, "teachers are the key to placement". Interviewees credited teachers more than any other school personnel with placing graduating or former students in jobs related to their training. Placement was not considered the responsibility of teachers as a matter of written policy at any of the case study sites. The placement of students was not used as a criterion for evaluating teachers at any of the case study sites. Nonetheless, most teachers, especially at high placement sites, appeared to believe, as one teacher stated, that "Placement is my responsibility."

At the high placement sites, vocational education teachers appeared to be more actively involved in job placement and appeared to have a greater sense of identification with their role in the placement process than teachers at the low placement sites. Several teachers at high placement sites indicated that they perceived support from the school administration and the community for their role in job placement. Teachers described their job placement responsibilities as teaching of job-seeking skills, maintaining communication with employers in the community, and recommending students to employers. Teachers felt, however, that the lack of time and opportunity to upgrade their skills, maintain contact with employers, and write in-depth recommendations for students detracted from job placement. Teachers at both high and low placement sites believed placement would be increased if their school had a placement office which would serve as a central clearing house to gather and disseminate information and provide clerical assistance.

No consistent mode of vocational education program planning emerged from the analysis of interviews and documents at the eight case study sites. Administrators and teachers at all sites indicated that advisory committee input was used to some degree, but no other processes were common to all sites. The most frequent sources of information for program planning were needs assessments, state level planning data, teacher input, and student interests. At high placement sites, community needs assessment surveys were used more frequently than at low placement sites. Several school administrators indicated they were cautious when interpreting results of needs assessments for planning purposes. Approximately half of the employers responding to the mail questionnaire had participated in needs assessments conducted by the schools. Employers indicated they should be contacted more frequently, with three-fourths wanting yearly opportunities to provide input. Vocational education directors believed that the state education agencies, the local vocational education advisory committees, and the vocational education teachers most frequently determined the skills to be taught in the vocational education programs.

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The most formalized involvement of the business sector with secondary vocational education programs was through advisory committees. Members of advisory committees interivewed at both high and low case study sites were informed about at least one vocational education program and were involved in providing some degree of input to improve the program. The majority of the advisory committee members who responded to the mail questionnaire were white males with four years or more of college. The majority were administrators, professionals, or owners of their own business. Advisory committee members from high placement sites had shorter tenure in their roles. The activity most frequently conducted by advisory committee members was evaluation of vocational education programs, while the activity with the least participation was assisting in the job placement of students.

Employers who were not advisory committeee members indicated sporadic involvement in the vocational education programs. While school personnel at the case study sites agreed that contact with employers enhanced job placement, employers responding to the mail questionnaires reported that they were contacted less often than they felt was desirable. Vocational education teachers at high placement sites reported more frequent contact with employers than teachers at low placement sites. Employers at high placement sites, however, reported less frequent participation in placement related activities than those at low placement sites. Employers reported they had participated most frequently in cooperative education programs and least frequently in industry/school staff exchanges.

It appeared that follow-up studies and other forms of evaluation were conducted for compliance with reporting requirements. Program evaluation was conducted at most of the sites participating in the mail questionnaire, with somewhat more frequent evaluation conducted at high placement sites. The most important finding regarding evaluation to emerge from the case studies was that at both high and low placement sites evaluation information, particularly information obtained from mail follow-up surveys, was not used effectively for program improvement. A major theme expressed in interviews was that follow-up survey information was used rarely in decision making or program improvement. Numerous interviewees agreed, as one placement specialist commented, "Survey results are primarily used for show and tell."

The findings indicate that while some counselors provided help with job placement, most did not assume responsibility for job placement for several reasons. One reason was the lack of administrative policy; another was the view held by the counselors and other school personnel that counselors were not responsible for job placement. Counselors also pointed out how their work loads prohibitied sufficient dyadic or group counseling for job placement. On the other hand, counselors were regarded as having a major role in admission of students to the vocational education programs. More vocational education directors at high placement sites than at low placement sites said that counselors recruit most of the students. About half of the vocational education directors at both types of sites said that counselors selected the students for the vocational education programs. Interviewees at case study sites felt that there were both "creaming" and "open door" policies regarding student admissions, while mail questionnaire respondents indicated that student choice was the most frequent criterion for admissions.

The sites in the study varied in the ways in which they provided job placement services and the activities they incorporated as part of those services. Of the sixty-two sites that participated in the mail questionnaire, thirty-four sites had offices designed to provide job placement services. Of these fourteen were high placement sites while twenty were low placement sites. Some combinations of job placement services were provided at the majority of the sites without job placement offices. The service offered most frequently was availability of relevant materials and information.

At high placement sites the responsibility for job placement was spread among more school personnel. Over a third of the respondents to the mail questionnaire believed that job placement personnel should hold the most responsibility for the job placement of students. At high placement sites, more principals and vocational education teachers believed that teachers should hold "very much responsibility" for job placement. While job placement specialists indicated they spent more time than other school personnel conducting job placement activities, the majority of school personnel spent very little or no time conducting such activities. Teachers at high placement sites spent more time than teachers at low placement sites. They spent most of that time talking about job openings. Current students were the primary recipients of job placement services at both high and low placement sites.

The majority of respondents agreed that having a positive work attitude was the most helpful factor for a vocational education student in obtaining a job. Students and parents, on the other hand, felt that having basic education skills was more important than a positive work attitude. Employers felt that work attitude was the most important factor they considered when hiring someone for an entry-level position. The consensus among respondents was that the lack of entry-level jobs in the local community was the major deterrent to high job placement.

The findings indicate that the vocational education curriculum was updated more frequently at high placement sites than at low placement sites. The predominent input for curriculum revision came from advisory committees. According to the mail questionnaire respondents, needs assessments were also frequently used for revisions. At the case study sites, curriculum revision appeared to be done sporadically, without extensive planning or use of input from advisory committees and needs assessments. Teachers were primarily responsible for curriculum revision and development, although the processes varied among the sites.

The two primary modes of teaching vocational education identified in the literature and observed at the sites are classroom training and on-the-job training. Classroom training provided students with a theoretical background, while on-the-job training provided practical experience in a real-job setting. Classroom training was more oriented towards individualized performance-based instruction at some sites compared with others, but no consistent pattern emerged as representative of high or low job placement sites. Cooperative education was offered at all but one case study site. Interviewees at the site without cooperative education frequently discussed how the addition of such a program would enhance vocational education at their site. The majority of interviewees were very postive about cooperative education, pointing out how it enhanced understanding of vocational skills and provided opportunities for employment. While most employers extolled the benefits of participation in cooperative education programs, a few pointed out that lack of frequent communication with teachers decreased the possible benefits to the participating students.

A greater percentage of former students responding to the mail questionnaire belonged to vocational education youth organizations at high placement sites than at low placement sites. At the case study sites the majority of the interviewees were positive about participation in youth organizations. Students felt that participation provided them with valuable employment related experiences. Although in the minority, some school personnel expressed concern that the competitive aspects of youth organizations detracted from the benefits derived from participation.

A third (33 percent) of the respondents to the mail questionnaire were school personnel. Of these, 12 percent represented high placement sites and 21 percent represented low placement sites. School personnel were predominantly white, male, over thirty-five years old and had attained education beyond the baccalaureate degree. More high placement respondents to the mail questionnaire indicated they were of non white origin than school personnel at the low placement sites. Administrators and teachers at high placement sites tended to be younger than their counterparts at low placement sites. School personnel at high placement sites tended to hold higher degrees than personnel at low placement sites. Vocational education teachers from high placement sites had somewhat fewer years of related work experience than teachers at low placement sites. The majority of the school personnel had held their present positions between one and ten years.

Responding current and former students from both high and low placement sites were predominantly white and female. The ratio of white to minority students was disproportionately larger for former students than for current ones. Students reported that the averages of their grades were higher for vocational education courses than for all their school programs. Current students were more optimistic than former students about the chances for employment of a high schol graduate with two years of vocational education compared to a worker with two years of experience and no vocational education.

CHAPTER IV

IMPRESSIONS, IMPLICATIONS, AND SUGGESTIONS FOR ADDITIONAL RESEARCH

Before presenting impressions, implications, and suggestions for further research, it is appropriate to recall some of the methodological dimensions and limitations of this study. We cannot state with any degree of certainty that the sample states, schools, or individual respondents are representative of the respective populations from which they are drawn. However, the findings may be transferable to other schools to the extent that those schools possess characteristics similar to the schools described in this study.

Multiple goals are operationalized simultaneously for many vocational education programs. For the purposes of this study, the dependent variable, placement in a job related to training, is not, in the view of many secondary school policymakers and decision makers, the major criterion for planning and evaluating vocational education programs. Some individuals responsible for programs indicated that they were not striving to place students in jobs related to their training. Other programs were specifically targeted toward the placement of the students in jobs related to their training. In general, job related placement is not believed to be the primary purpose of secondary vocational education programs by educators, students, parents, or employers. Such diversity about program goals makes it difficult, (some would argue, impossible), to draw conclusions about the factors influencing the placement of students in training related jobs from data collected within a local education agency, and certainly from data collected across local sites in different states.

This study represented an attempt to analyze quantitative and qualitative data from several different sources. In addition, the extent of the data collected and the large number of variables dealt with created special analysis problems. The methodology for dealing effectively with the analysis and synthesis of qualitative and quantitative data deserves more attention from astute minds.

It can be argued that insufficient time was spent at the case study sites. Perhaps fewer sites and longer time spent per site would be a better approach. However, the choice of at least one case study site per state provided valuable insights as the staff analyzed the data.

In analyzing some of the existing data, special problems were encountered because of the unavailability of certain kinds of data for a given time period. The reader should be aware that some of the data comes from different time periods.

It should be evident to the reader that this study represents a compilation of data from many sources. The credibility of the findings is enhanced by the extensive triangulation that was possible by having data from multiple sources.

Impressions

The "impressions" which follow are based on the integration of quantitative and qualitative data. Specifically, four data bases were examined. They included the review of literature, analysis of existing data (586 LEAs, seven states), case studies (eight LEAs), and mail questionnaires (ten respondent groups in sixty-two LEAs). These impressions should not be regarded as generalizations. At best they are working hypotheses, to be tested again and again in the ever-changing context in which vocational education programs operate. If vocational educators are to maximize the placement of former students in jobs related to their training, it appears that the following points should be given careful attention. Higher job placement seems to exist in those schools where:

- o Administrators, counselors, and teachers developed a clear understanding that the primary purpose of the vocational education programs in their school system was the placement of former students in jobs related to their training.
- o Administrators, counselors, and teachers in a school system are consistent with each other concerning their belief that the primary purpose of vocational education is the placement of former students in jobs related to their training.
- o Principals are committed to the placement of former vocational education students in jobs related to their training program. Principals are key individuals because of their leadership role, control of resouces and scheduling of classes.
- o There is a high level of staff enthusiasm for job placement. There is an eagerness to talk about the placement of former students in jobs related to their training.
- o Teachers are committed to the position that they have a great amount of responsibility for placing students in jobs related to their training.
- o Student admission to vocational education programs is restricted to students interest and high potential.

- The vocational education curriculum is oriented to the needs of employers.

- Frequent use is made of needs assessment surveys for planning and evaluating vocational education programs.

- Cooperative vocational education programs actually place students in jobs related to their training programs.

- There is a high demand for workers in the surrounding labor market area. Labor market conditions over which vocational education have no control are at least as important as the nature of vocational education itself in determining job placement.

- Manufacturing is a major industry in the community in which the school is located.

- There is a mix of industry sizes with proportionally fewer large industry in the area served by the school.

- The school is located in a community with proportionally more nonwhites in the population.

- Teachers have regular contact with employers regarding the job placement of students.

- Students participate in youth organizations.

- The job placement office provides coordination and includes teachers in job placement activities.

- Students are provided training in job readiness skills.

- Students acquire the basic education skills needed to obtain a job and to perform on the job.

- Transportation to jobs is available.

- The school staff resembles the racial balance of the community served.

Implications

Policymakers and decision makers interested in optimizing the placement of former secondary vocational education students in jobs related to their training should give careful attention to the following implications. All of the implications deal with education factors over which vocational educators have some control. Labor market and community characteristics which are associated with high rates of job placement are beyond the control of vocational educators. Policymakers and decision makers who believe that placement in a job related to training is important may find the following implications helpful.

The implications presented are derived from project staff analysis of the general impressions juxtaposed with project staff knowledge of current situations in vocational education. Other individuals operating from a different frame of reference may develop additional implications. The reader is cautioned to remember that the study was not designed to determine causality. The following implications are presented on the basis of the preponderance of study evidence supporting the general impressions from which the implications were developed.

- Any school system wishing to optimize the placement of former secondary vocational education students in jobs related to their training must be certain that the goal of job placement is clearly communicated to and understood by all of the school staff. Unless this basic philosophical position is internalized and operationalized by each member of the school staff there will be less than optimal results. Since job placement was not the primary goal of any respondent group in this study it becomes more important that a school system develop goals consistent with the philosophy of vocational education, which are clearly understood by all key actors.

- Given the key role of the school principal it is essential that the principal have a clear understanding of the goal to place students in jobs related to their training and the resources needed to accomplish the goal. More effective ways of conveying this need must be incorporated into graduate programs designed to prepare and upgrade school principals.

- School personnel, especially vocational education teachers, need to understand the potential significance of the involvement of business and industry in planning, conducting, and evaluating vocational education programs. Teacher educators need to devote a portion of the teacher preparation program to the development of a strong rationale and techniques for involving business and industry with the education agency. Inservice education programs dealing with the involvement of business and industry should be provided to teachers and administrators. Staff/industry personnel exchange programs provide one means of securing closer ties between vocational education and business/industry.

- Teachers and administrators need to know how to effectively involve community members through advisory committees.

- Teacher education programs and inservice education programs should be designed to impart to teachers an understanding of the vital role they play in job placement.

- Teacher reward systems should reflect the important role teachers have in job placement.

- Personnel policies and personnel development programs should reflect the importance of the vocational education teacher, having recent on-the-job experience in the occupation related to the area in which they are teaching. Job descriptions, promotions, and salary increases could be used to encourage teachers to maintain recent occupational experience.

- If funding agencies believe job placement to be important, then placement rates should be used in the formula to calculate the amount of an agency's entitlement. Schools and administrators should be rewarded for facilitating the job placement process.

- Criteria used to evaluate vocational education programs should be reflective of those processes identified in this study as appearing to influence the placement of former students in jobs related to their training. Accrediting agencies and state and local policy groups should consider the findings of this study before specifying program evaluation criteria. In addition to relevant job placement, program evaluations should be based on basic skill acquisition, continuation in school, and career exploration criteria.

- Before installing centralized job placement offices, policymakers and decision makers should seek additional information concerning the effectiveness and efficiency of centralized job placement offices compared with teacher-based job placement efforts.

- The leadership role of the local vocational education director is critical in most schools. Graduate and inservice education programs designed for vocational education directors should assist current and potential directors in acquiring an understanding of the factors which influence job placement.

- Given the positive correlation of high job placement with participation in youth groups, it is important that information be provided which will enable administrators and teachers to develop and maintain effective vocational education youth organizations.

o Although the effectiveness of inquiry modes was not the focus of this study, it does appear that the study provides very strong support for the value of naturalistic inquiry in vocational education. The findings from the case studies yielded essentially the same general impressions as the findings from the analysis of existing data and the analysis of the findings from the mail questionnaires. Vocational teacher educators need to design graduate research courses which provide their students the theoretical and technical skills needed to conduct naturalistic investigations. Inservice educaation programs on naturalistic inquiry need to be designed and conducted for teacher educators, federal, state, and local leaders in planning, research, and evaluation, and local teachers interested in the planning, research, and evaluation processes.

o More effective and efficient means need to be developed to keep the vocational education curriculum updated. There appears to be a higher job placement rate in those schools with curriculum highly relevant to the needs of business/industry. State and local policymakers and decision makers need to implement comprehensive and systematic ways of maintaining curriculum relevance.

o Program evaluation plans should include specific plans for dissemination and utilization of findings.

o The schools participating in this study, for the most part, conducted minimal program evaluation efforts. Undergraduate, graduate, and inservice education programs should be designed to teach the theory and technical skills essential to planning, conducting and evaluating program evaluation efforts. These programs should be available to administrators, teachers, counselors, job placement specialists, and other interested individuals. Special programs should be offered to key policymakers and decision makers regarding the utilization of program evaluation findings to improve vocational education programs.

0 Most of the schools participating in the study conducted minimal formalized program planning processes. Teachers, administrators, and key policymakers need to be provided inservice education programs concerning the rationale for planning. These inservice education

programs should also provide the participants with the essential technical skills needed to do effective planning.

- Personnel in the field of vocational education need to clairfy the philosophical position and goals for vocational education at the secondary level. If that clarification statement presents evidence supporting multiple goals at the secondary level, then policy-makers, decision makers, and the general public would, at least, be more aware of the dangers involved when imposing a goal such as training related placement on secondary vocational education programs.

Suggestions for Additional Research

Numerous questions arose as the project staff planned and conducted this study. The breadth and complexity of the issues surrounding a school's efforts to assure that students are placed in jobs related to their training needs considerable study. The following null hypotheses are presented as suggestions for additional research:

- There is no relationship between job placement rates and a clear understanding on the part of key actors (administrators, counselors, and teachers) regarding the primary purpose of the vocational education programs in their school system.
- There is no relationship between job placement rates and consistency of belief among key actors (administrators, counselors, and teachers) in a school system concerning the purpose of vocational education.
- There is no relationship between job placement rates and the degree of committment on the part of principals to job placement.
- There is no relationship between job placement rates and the level of enthusiasm for job placement among school staff members.
- There is no relationship between job placement rates and student admission procedures.
- There is no relationship between job placement rates and the amount of responsibility teachers believe they have for placing their students in jobs.

- There is no relationship between job placement rates and the degree to which cooperative education programs place students in jobs related to their training program.
- There is no relationship between job placement rates and labor market demand in the surrounding area.
- There is no relationship between job placement rates and whether or not manufacturing is a major industry in the school's community.
- There is no relationship between job placement rates and the percentage of students from schools in the community who have had vocational training.
- There is no relationship between job placement rates and the proportion of large to small industries in the community.
- There is no relationship between job placement rates and the proportion of nonwhite persons in the community.
- There is no relationship between job placement rates and the frequency that results from surveys are used to plan and evaluate vocational education programs.
- There is no relationship between job placement rates and the frequency of contacts between vocational education teachers and employers regarding the job placement of students.
- There is no relationship between job placement rates and the frequency of student participation in youth organizations.
- There is no relationship between job placement rates and the degree to which school job placement offices include teachers in job placement activities.
- There is no relationship between job placement rates and the degree to which students are provided with job-readiness skills.
- There is no relationship between job placement rates and student basic skill achievement.
- There is no relationship between job placement rates and available transportation to and from jobs.
- There is no relationship between job placement rates and a school's student dropout rate.

APPENDIX A

STUDY CONSULTANTS

APPENDIX A

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The following individuals provided advice regarding various phases of the study. The National Center is indebted to their assistance.

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APPENDIX B

MAIL QUESTIONNAIRES

Vocational Education Directors

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for
Research in Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school system is helping in a national study on vocational education. You have been selected as a representative of your school system to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school system.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

This information is CONFIDENTIAL; no data will be associated with the name of an individual.

INFORMATION ABOUT JOB PLACEMENT

SECTION I: JOB PLACEMENT ACTIVITIES FOR VOCATIONAL EDUCATION STUDENTS IN YOUR SCHOOLS

1. For your school system, who primarily conducts the following job placement activities? (For each activity listed, check the one appropriate person/agency.)

	Individuals/Agencies								
Activities	Private Employment Agencies	Public Employment Agencies	Local Vocational Education Advisory Committee	Local Vocational Education Director	School Job Placement Officer	Vocational Education Teacher	Guidance Counselor	Other	No One
a. Postsecondary educational placement	☐	☐	☐	☐	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job application, training in job interview techniques)	☐	☐	☐	☐	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐	☐	☐	☐	☐
h. Working with labor unions	☐	☐	☐	☐	☐	☐	☐	☐	☐
i. Working with local vocational education advisory committee	☐	☐	☐	☐	☐	☐	☐	☐	☐
j. Other; please specify: ______________________	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. For your vocational education programs, who primarily conducts the following activities? (For each of the activities listed, check the appropriate box.)

	Individuals/Agencies							
Activities	State Education Agency	Local Vocational Education Advisory Committee	Local Vocational Education Director	Principal	Vocational Education Teacher	Guidance Counselor	Other	No One
a. Determining skills to be taught	☐	☐	☐	☐	☐	☐	☐	☐
b. Developing vocational education curriculum	☐	☐	☐	☐	☐	☐	☐	☐
c. Recruiting students for vocational education programs	☐	☐	☐	☐	☐	☐	☐	☐
d. Selecting students for entry into vocational education programs	☐	☐	☐	☐	☐	☐	☐	☐
e. Follow-up of former vocational education students	☐	☐	☐	☐	☐	☐	☐	☐
f. Financial allocation for equipment and supplies	☐	☐	☐	☐	☐	☐	☐	☐

3. How frequently are the following activities conducted for your vocational education program? (For each of the activities listed, check the appropriate box.)

	Every Year	Every Two Years	Every Three Years	Every Five Years	Never
a. Revision of vocational education curriculum	☐	☐	☐	☐	☐
b. Follow-up of vocational education completers	☐	☐	☐	☐	☐
c. Follow-up of non-completers of vocational education leavers	☐	☐	☐	☐	☐

4. How often do you evaluate the activities of the local vocational education advisory committee? (Check *one.*)

   ☐ Every year

   ☐ Every two years

   ☐ Every three years

   ☐ Never

   ☐ Other, please specify: ________________________________

5. How frequently are vocational education programs evaluated by the following person/agency?

	Every Year	Every Two Years	Every Three Years	Every Five Years	Never
a. School principal	☐	☐	☐	☐	☐
b. Local director of vocational education	☐	☐	☐	☐	☐
c. State education agency	☐	☐	☐	☐	☐
d. Local vocational education advisory committee	☐	☐	☐	☐	☐
e. State or regional accrediting commission	☐	☐	☐	☐	☐

Please go on to next page.

SECTION II: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

6. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

7. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ______________	☐	☐	☐	☐	☐

8. Of what help are the following factors for your high school vocational education students in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Occupational skills and competencies	☐	☐	☐	☐	☐
c. Human relations skills	☐	☐	☐	☐	☐
d. Positive work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other, please specify: ______________________	☐	☐	☐	☐	☐

9. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

10. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

11. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ______________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION

12. What is your date of birth? (Write the number on the blanks.)

_______/_______
Month Year

13. What is your sex?

☐ Female ☐ Male

14. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ________________________________

15. What is your highest educational level? (Check *one*)

☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other, please specify: ________________________________

16. Please indicate the approximate amount of time you spend participating in the following activities at your school. (For each activity, place a check in the appropriate box. Also, if you have been certified for any of these activities, please place a check in the box to the right of the appropriate activity.

	Full-time	Half-time	Quarter time	Less than quarter time	Holding Certificate
a. ADMINISTRATION	☐	☐	☐	☐	☐
b. TEACHING					
Trade and Industrial Education	☐	☐	☐	☐	☐
Agriculture Education	☐	☐	☐	☐	☐
Business Education	☐	☐	☐	☐	☐
Health Education	☐	☐	☐	☐	☐
Occupational Home Economics	☐	☐	☐	☐	☐
Distributive Education	☐	☐	☐	☐	☐
Technical Education	☐	☐	☐	☐	☐
Cooperative Education	☐	☐	☐	☐	☐
c. GUIDANCE AND COUNSELING	☐	☐	☐	☐	☐
d. JOB PLACEMENT	☐	☐	☐	☐	☐
e. Other, please specify:	☐	☐	☐	☐	☐

17. Please indicate the length of time that you have been involved in the following activities. (Write the number on the blanks; if item does not apply to you, write zero (0).)

a. Total length of time of teaching experience in vocational education ____ year(s)

b. Total length of time of teaching experience in nonvocational education ____ year(s)

c. Total length of time in your present position ____ year(s)

d. Total length of time in work experiences related to your present position ____ year(s)

e. Total length of time in work experiences *not* related to your present position ____ year(s)

SECTION IV: ADDITIONAL COMMENTS

18. Briefly indicate recommendations you would make to help your school system increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Principals

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for
Research in Vocational Education
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: **After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?**

☐ **Very Good** ☑ **Good** ☐ **Neutral** ☐ **Poor** ☐ **Very Poor**

Example 2: **How important are the following factors for vocational education students in obtaining jobs?**

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: JOB PLACEMENT ACTIVITIES FOR VOCATIONAL EDUCATION STUDENTS IN YOUR SCHOOL

1. Which of the following do you have in your school for job placement services? (Check *all* that apply.)

   a. ☐ Designated job placement officer(s)
   b. ☐ Office space
   c. ☐ Clerical staff
   d. ☐ Job information, e.g., job listings
   e. ☐ Instructional materials on job seeking and job obtainment skills
   f. ☐ Other, please specify: ____________________
   g. ☐ None of the above; skip to Question # 3.

2. When did your school open its job placement office? (Write the number in the blocks.)

   19 ☐ ☐
   YEAR

3. In your school, who receives job placement services? (Check *all* that apply.)

   a. ☐ Current vocational education students
   b. ☐ Vocational education program completers, until they find their first job
   c. ☐ Vocational education program leavers, until they find their first job
   d. ☐ Former vocational education students, both completers and leavers, as often as they wish to use the service
   e. ☐ Other, please specify: ____________________

SECTION II:

YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

4. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

5. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ______	☐	☐	☐	☐	☐

6. Of what help are the following factors for your high school vocational education students in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Occupational skills and competencies	☐	☐	☐	☐	☐
c. Human relations skills	☐	☐	☐	☐	☐
d. Positive work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other, please specify: ____________	☐	☐	☐	☐	☐

7. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

8. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

9. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ____________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION

10. What is your date of birth? (Write the number on the blanks.)

________ / ________
Month Year

11. What is your sex?

☐ Female ☐ Male

12. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________________

13. What is your highest educational level? (Check *one*)

☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other, please specify: ______________________________

14. Please indicate the approximate amount of time you spend participating in the following activities at your school. (For each activity, place a check in the appropriate box.) Also, if you have been certified for any of these activities, please place a check in the box to the right of the appropriate activity.

	Full-time	Half-time	Quarter time	Less than quarter time	Holding Certificate
a. ADMINISTRATION	☐	☐	☐	☐	☐
b. TEACHING					
Trade and Industrial Education	☐	☐	☐	☐	☐
Agriculture Education	☐	☐	☐	☐	☐
Business Education	☐	☐	☐	☐	☐
Health Education	☐	☐	☐	☐	☐
Occupational Home Economics	☐	☐	☐	☐	☐
Distributive Education	☐	☐	☐	☐	☐
Technical Education	☐	☐	☐	☐	☐
Cooperative Education	☐	☐	☐	☐	☐
c. GUIDANCE AND COUNSELING	☐	☐	☐	☐	☐
d. JOB PLACEMENT	☐	☐	☐	☐	☐
e. Other, please specify: ______________________	☐	☐	☐	☐	☐

15. Please indicate the length of time that you have been involved in the following activities. (Write the number on the blanks; if item does not apply to you, write zero (0).)

a. Total length of time of teaching experience in vocational education ____ year(s)

b. Total length of time of teaching experience in nonvocational education ____ year(s)

c. Total length of time in your present position ____ year(s)

d. Total length of time in work experiences related to your present position ____ year(s)

e. Total length of time in work experiences *not* related to your present position ____ year(s)

SECTION IV: ADDITIONAL COMMENTS

16. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Vocational Education Teachers

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for
Research in Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: JOB PLACEMENT ACTIVITIES FOR VOCATIONAL EDUCATION STUDENTS IN YOUR SCHOOL

1. What is the average number of 12th grade vocational education students to whom you give some kind of job placement assistance in an academic year (e.g., job referral, contacting employers about job openings)? ______

   What is the average number of vocational education students (12th grade) enrolled in your classes in an academic year? ______

2. How many hours per week do you work for the school?

   Total hours working per week: ______

3. How many hours per week do you spend on job placement activities?

   Total hours spent on job placement activities per week: ______
   (If zero (0) hours, skip to Question # 7.)

4. Of the hours you spend on job placement activities per week, how many of those are spent:

   Providing training in job seeking and job obtaining skills (e.g., preparing job applications, training in job interview techniques)? ______ hours per week

   Talking with the students about specific job openings? ______ hours per week

   Contacting employers about job openings for students? ______ hours per week

   Conducting follow-up of former students? ______ hours per week

   Keeping records and reporting activities? ______ hours per week

   Other; please specify:

   ________________________________ ______ hours per week

5. Please indicate how frequently you participate in the following placement activities. (For the following activities, please check the appropriate box.)

	Very Frequently	Frequently	Sometimes	Rarely	Never
a. Postsecondary educational placement	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other; please specify: ______________________	☐	☐	☐	☐	☐

6. How often do you typically contact businesses and industries regarding job placement of vocational education students? (Check *one.*)

☐ Once a month

☐ Four times a year

☐ Twice a year

☐ Once a year

☐ Never

☐ Other; please specify: ______________________

7. Which of the following are considerations for admission of students to your vocational education program(s)? (Check *all* that apply.)

☐ Grade point average

☐ Personal interview

☐ Career objective

☐ Any student who wishes may enroll in the vocational education program

☐ Other; please specify: ______________________

8. What best characterizes the socioeconomic levels of parents of vocational education students typically enrolled in your program? (Check *one.*)

☐ Upper ☐ Upper Middle ☐ Middle ☐ Lower Middle ☐ Lower

9. Where do students typically enrolled in your vocational education program rank in their high school class? (Check *one.*)

- ☐ Upper one-fourth
- ☐ Upper one-third
- ☐ Upper one-half
- ☐ Lower one-half
- ☐ Lower one-third
- ☐ Lower one-fourth

10. How often do you have formal contact with the parents of your vocational education students concerning the students' progress in the program area(s) you teach? (Check *one.*)

- ☐ Once a month
- ☐ Four times a year
- ☐ Twice a year
- ☐ Once a year
- ☐ Never
- ☐ Other; please specify: ____

Please go on to the next page.

SECTION II: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

11. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important (("5". (Place the number in the blank to the right of the goal.)

a. To place students as they leave school in a job related to their training ______

b. To provide the students with competencies needed to obtain a job ______

c. To place students as they leave school in a job not necessarily related to their training ______

d. To create an awareness of the various jobs for which one might prepare ______

e. To provide an opportunity for students to explore various occupational areas ______

12. Of what help are the following as a source of information about job openings for vocational education graduates? (For each of the following sources, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Vocational education teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Your job placement service	☐	☐	☐	☐	☐
d. Parents	☐	☐	☐	☐	☐
e. Relatives other than parents	☐	☐	☐	☐	☐
f. Friends	☐	☐	☐	☐	☐
g. Former vocational education students who have jobs	☐	☐	☐	☐	☐
h. Newspapers	☐	☐	☐	☐	☐
i. TV and radio	☐	☐	☐	☐	☐
j. Public employment service	☐	☐	☐	☐	☐
k. Cooperative education teacher	☐	☐	☐	☐	☐
l. Private employment service	☐	☐	☐	☐	☐
m. Other; please specify: ______________	☐	☐	☐	☐	☐

13. How would you rate your school's performance in providing the following placement activities to vocational education students? (For each of the following activities, please check the appropriate box.)

	Excellent	Good	Fair	Poor	Failing
a. Postsecondary educational placement	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other; please specify: ____________	☐	☐	☐	☐	☐

14. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ____________	☐	☐	☐	☐	☐

13. How would you rate your school's performance in providing the following placement activities to vocational education students? (For each of the following activities, please check the appropriate box.)

	Excellent	Good	Fair	Poor	Failing
a. Postsecondary educational placement	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other; please specify: ____________________	☐	☐	☐	☐	☐

14. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other; please specify: ____________________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION

19. What is your date of birth? (Write the number on the blanks.)

_______/_______
Month Year

20. What is your sex?

☐ Female ☐ Male

21. What is your ethnic origin? (Check *one.*)

☐ American Indian or Alaskan Native

☐ Asian American or Pacific Islander

☐ Black, not of Hispanic Origin

☐ Hispanic

☐ White, not of Hispanic Origin

☐ Other; please specify: ____________________

22. What is your highest educational level? (Check *one.*)

☐ 10-11 years of school (part high school)
☐ High school graduate
☐ 1-3 years college (also business school)
☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other; please specify: ____________________

23. Please indicate the approximate amount of time you spend participating in the following activities at your school. (For each activity, place a check in the appropriate box.) Also, if you have been certified for any of these activities, please place a check in the box to the right of the appropriate activity.

		Full time	Half time	Quarter time	Less than quarter time	Holding Certificate
a.	ADMINISTRATION	☐	☐	☐	☐	☐
b.	TEACHING					
	Trade and Industrial Education	☐	☐	☐	☐	☐
	Agriculture Education	☐	☐	☐	☐	☐
	Business Education	☐	☐	☐	☐	☐
	Health Education	☐	☐	☐	☐	☐
	Occupational Home Economics	☐	☐	☐	☐	☐
	Distributive Education	☐	☐	☐	☐	☐
	Technical Education	☐	☐	☐	☐	☐
	Cooperative Education	☐	☐	☐	☐	☐
c.	GUIDANCE AND COUNSELING	☐	☐	☐	☐	☐
d.	JOB PLACEMENT	☐	☐	☐	☐	☐
e.	Other: please specify: ____________	☐	☐	☐	☐	☐

24. Please indicate the length of time that you have been involved in the following activities. (Write the number on the blanks; if item does not apply to you, write zero (0).)

a. Total length of time of teaching experience in vocational education ____ year(s)

b. Total length of time of teaching experience in nonvocational education ____ year(s)

c. Total length of time in your present position ____ year(s)

d. Total length of time in work experiences related to your present position ____ year(s)

e. Total length of time in work experiences *not* related to your present position ____ year(s)

SECTION IV: ADDITIONAL COMMENTS

25. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Counselor

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

**CONFIDENTIAL:
FOR RESEARCH USE ONLY**

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for Research in
Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of
Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school how do you compare vocational education students with the non-vocational education students in their chances of getting a job?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

This information is CONFIDENTIAL; no data will be associated with the name of an individual.

18. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very Much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ______________________	☐	☐	☐	☐	☐

Please go on to next page.

INFORMATION ABOUT JOB PLACEMENT

SECTION I: JOB PLACEMENT ACTIVITIES FOR VOCATIONAL EDUCATION STUDENTS IN YOUR SCHOOL

1. How many hours per week do you work for the school?

   Total hours working per week: ____________

2. How many hours per week do you spend on job placement activities? (e.g., job referral, contacting employers about job openings)

   Total hours spent on job placement activities per week: ______
   (If zero (0) hours, skip to Question #5)

3. Of the hours you spend on job placement activities per week, how many of those are spent:

Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)?	______	hours per week
Talking with the students about specific job openings?	______	hours per week
Contacting employers about job openings for students?	______	hours per week
Conducting follow-up of former students?	______	hours per week
Keeping records and reporting activities?	______	hours per week
Other, please specify:	______	hours per week

____

7. How would you rate your school's performance in providing the following job placement activities to vocational education students? (For each of the following activities, please check the appropriate box.)

Activities	Excellent	Good	Fair	Poor	Failing
a. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
b. Contacting employers about jobs for students	☐	☐	☐	☐	☐
c. Coordinating with public employment services	☐	☐	☐	☐	☐
d. Job referral	☐	☐	☐	☐	☐
e. Occupational counseling	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other; please specify: ______________________	☐	☐	☐	☐	☐

8. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ______________________	☐	☐	☐	☐	☐

9. Of what help are the following factors for your high school vocational education students in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Occupational skills and competencies	☐	☐	☐	☐	☐
c. Human relations skills	☐	☐	☐	☐	☐
d. Positive work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other, please specify: ____________________	☐	☐	☐	☐	☐

10. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one*.)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

11. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one*.)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

12. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very Much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ____________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION

13. What is your date of birth? (Write the number on the blanks.)

_______ / _______
Month Year

14. What is your sex?

☐ Female ☐ Male

15. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________________

16. What is your highest educational level? (Check *one*)

☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other, please specify: ______________________________

17. Please indicate the approximate amount of time you spend participating in the following activities at your school. (For each activity, place a check in the appropriate box.) Also, if you have been certified for any of these activities, please place a check in the box to the right of the appropriate activity.

	Full time	Half-time	Quarter time	Less than quarter time	Holding Certificate
a. ADMINISTRATION	☐	☐	☐	☐	☐
b. TEACHING					
Trade and Industrial Education	☐	☐	☐	☐	☐
Agriculture Education	☐	☐	☐	☐	☐
Business Education	☐	☐	☐	☐	☐
Health Education	☐	☐	☐	☐	☐
Occupational Home Economics	☐	☐	☐	☐	☐
Distributive Education	☐	☐	☐	☐	☐
Technical Education	☐	☐	☐	☐	☐
Cooperative Education	☐	☐	☐	☐	☐
c. GUIDANCE AND COUNSELING	☐	☐	☐	☐	☐
d. JOB PLACEMENT	☐	☐	☐	☐	☐
e. Other, please specify: ________________	☐	☐	☐	☐	☐

18. Please indicate the length of time that you have been involved in the following activities. (Write the number on the blanks; if item does not apply to you, write zero (0).)

a. Total length of time of teaching experience in vocational education ____ year(s)

b. Total length of time of teaching experience in nonvocational education ____ year(s)

c. Total length of time in your present position ____ year(s)

d. Total length of time in work experiences related to your present position ____ year(s)

e. Total length of time in work experiences *not* related to your present position ____ year(s)

SECTION IV: ADDITIONAL COMMENTS

19. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Job Placement Specialist

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for Research in Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting a job?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided.
Thank you for your help.

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: JOB PLACEMENT ACTIVITIES FOR VOCATIONAL EDUCATION STUDENTS IN YOUR SCHOOL

1. How many hours per week do you work for the school?

   Total hours working per week: ____________

2. How many hours per week do you spend on job placement activities? (e.g., job referral, contacting employers about job openings)

   Total hours spent on job placement activities per week: ______

3. Of the hours you spend on job placement activities per week, how many of those are spent:

   Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)? ______ hours per week

   Talking with the students about specific job openings? ______ hours per week

   Contacting employers about job openings for students? ______ hours per week

   Conducting follow-up of former students? ______ hours per week

   Keeping records and reporting activities? ______ hours per week

   Other, please specify: ______ hours per week

   ____

4. What is the average number of twelfth-grade vocational education students to whom you give some kind of job placement assistance in an academic year (e.g., job referral, contacting employers about job openings)?

   ______ students

   What is the average total number of vocational education students (twelfth grade) enrolled in an academic year?

   ______ students

5. Please indicate how frequently you participate in the following placement activities. (For the following activities, please check the appropriate box.)

	Very Frequently	Frequently	Sometimes	Rarely	Never
a. Postsecondary educational placement	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other, please specify: ____________	☐	☐	☐	☐	☐

6. How often do you typically contact business and industries regarding vocational education students' job placements?

☐ Once a month

☐ Four times a year

☐ Twice a year

☐ Once a year

☐ Never

☐ Other, please specify: ____________________

7. Does your school provide instruction in job seeking and job obtainment skills?

☐ Yes; please go on to Question # 8.

☐ No; please go on to Question # 9.

8. Please indicate which of the following means are used to provide instruction in job seeking and job obtainment skills. (Check *all* that apply.)

- ☐ a. Required course
- ☐ b. Optional course
- ☐ c. Youth organization sponsored activities
- ☐ d. Self-instructional materials
- ☐ e. Special features
- ☐ f. Other, please specify: ______________________________

Please go on to the next page.

SECTION II: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

9. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

10. Of what help are the following as a source of information about job openings for vocational education graduates? (For each of the following sources, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Vocational education teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Your job placement service	☐	☐	☐	☐	☐
d. Parents	☐	☐	☐	☐	☐
e. Relatives other than parents	☐	☐	☐	☐	☐
f. Friends	☐	☐	☐	☐	☐
g. Former vocational education students who have jobs	☐	☐	☐	☐	☐
h. Newspapers	☐	☐	☐	☐	☐
i. TV and radio	☐	☐	☐	☐	☐
j. Public employment service	☐	☐	☐	☐	☐
k. Cooperative education teacher	☐	☐	☐	☐	☐
l. Private employment service	☐	☐	☐	☐	☐
m. Other; please specify: ______________________	☐	☐	☐	☐	☐

11. How would you rate your school's performance in providing the following placement activities to vocational education students? (For each of the following activities, please check the appropriate box.)

	Excellent	Good	Fair	Poor	Failing
a. Postsecondary educational placement	☐	☐	☐	☐	☐
b. Providing training in job seeking and job obtainment skills (e.g., preparing job applications, training in job interview techniques)	☐	☐	☐	☐	☐
c. Contacting employers about jobs for students	☐	☐	☐	☐	☐
d. Coordinating with public employment services	☐	☐	☐	☐	☐
e. Job referral	☐	☐	☐	☐	☐
f. Career counseling	☐	☐	☐	☐	☐
g. Providing information about job openings	☐	☐	☐	☐	☐
h. Other; please specify: ______________	☐	☐	☐	☐	☐

12. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other; please specify: ______________	☐	☐	☐	☐	☐

13. Of what help are the following factors for your high school vocational education students in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Occupational skills and competencies	☐	☐	☐	☐	☐
c. Human relations sk[illegible]	☐	☐	☐	☐	☐
d. Positive work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other; please specify: ______________	☐	☐	☐	☐	☐

14. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

15. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

16. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ____________________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION

17. What is your date of birth? (Write the number on the blanks.)

______/______
Month Year

18. What is your sex?

☐ Female ☐ Male

19. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________________

20. What is your highest educational level? (Check *one*)

☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other, please specify: ______________________________

21. Please indicate the approximate amount of time you spend participating in the following activities at your school. (For each activity, place a check in the appropriate box.) Also, if you have been certified for any of these activities, please place a check in the box to the right of the appropriate activity.

	Full time	Half time	Quarter time	Less than quarter time	Holding Certificate
a. ADMINISTRATION	☐	☐	☐	☐	☐
b. TEACHING					
Trade and Industrial Education	☐	☐	☐	☐	☐
Agriculture Education	☐	☐	☐	☐	☐
Business Education	☐	☐	☐	☐	☐
Health Education	☐	☐	☐	☐	☐
Occupational Home Economics	☐	☐	☐	☐	☐
Distributive Education	☐	☐	☐	☐	☐
Technical Education	☐	☐	☐	☐	☐
Cooperative Education	☐	☐	☐	☐	☐
c. GUIDANCE AND COUNSELING	☐	☐	☐	☐	☐
d. JOB PLACEMENT	☐	☐	☐	☐	☐
e. Other, please specify: ______________	☐	☐	☐	☐	☐

22. Please indicate the length of time that you have been involved in the following activities. (Write the number on the blanks; if an item does not apply to you, write zero (0).)

a. Total length of time of teaching experience in vocational education ____ year(s)

b. Total length of time of teaching experience in nonvocational education ____ year(s)

c. Total length of time in present position ____ year(s)

d. Total length of time of in-school placement service ____ year(s)

e. Total length of time of in-school guidance and counseling ____ year(s)

f. Total length of time of non-educational work experience. Please specify: ____ year(s)

____

SECTION IV: ADDITIONAL COMMENTS

23. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Advisory Committee Member

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for Research in Vocational Education, The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school system is helping in a national study on vocational education. You have been selected as a representative of your school system to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school system.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: ROLE OF THE ADVISORY COMMITTEE IN THE JOB PLACEMENT PROCESS

1. How long have you been a member of the local vocational education advisory committee?

   ______ year(s) ______ month(s)

2. Does your advisory committee assist the vocational education programs in performing the following activities?

	Yes	No
a. Identifying job tasks/skills performed by workers	☐	☐
b. Evaluating vocational education programs	☐	☐
c. Assisting in placing students in jobs	☐	☐
d. Developing school policy recommendations	☐	☐
e. Providing occupational information for guidance and job placement	☐	☐
f. Identifying emerging occupational areas	☐	☐
g. Identifying facility and equipment needs	☐	☐
h. Other, please specify: ______________________	☐	☐

3. How often does your vocational education advisory committee meet? (Check *one*)

   ☐ Once a month
   ☐ Four times a year
   ☐ Twice a year
   ☐ Once a year
   ☐ Never
   ☐ Other, please specify: ______________________

SECTION II: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

4. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

5. Of what help is your advisory committee in assisting the vocational education programs in performing the following activities?

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Identifying job tasks/skills performed by workers	☐	☐	☐	☐	☐
b. Evaluating vocational education programs	☐	☐	☐	☐	☐
c. Assisting in placing students in jobs	☐	☐	☐	☐	☐
d. Developing school policy recommendations	☐	☐	☐	☐	☐
e. Providing occupational information for guidance and job placement	☐	☐	☐	☐	☐
f. Identifying emerging occupational areas	☐	☐	☐	☐	☐
g. Identifying facility and equipment needs	☐	☐	☐	☐	☐
h. Other, please specify: ______	☐	☐	☐	☐	☐

6. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ____________	☐	☐	☐	☐	☐

7. Of what help are the following factors for your high school vocational education students in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Occupational skills and competencies	☐	☐	☐	☐	☐
c. Human relations skills	☐	☐	☐	☐	☐
d. Positive work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other, please specify: ____________	☐	☐	☐	☐	☐

8. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ____________________	☐	☐	☐	☐	☐

Please go on to the next page.

9. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

10. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

Please go on to the next page.

SECTION III: BACKGROUND INFORMATION

11. What is your date of birth? (Write the number on the blanks.)

_______/_______
Month Year

12. What is your sex?

☐ Female ☐ Male

13. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specifv: ______________________________

14. What is your highest educational level? (Check *one*)

☐ 10 to 11 years of school (part high school)
☐ High school graduate
☐ 1 to 3 years college (also business school)
☐ Four-year college graduate (B.A., B.S., etc.)
☐ Course credit beyond undergraduate degree
☐ Master's Degree (M.A., M.S., etc.)
☐ Course credit beyond Master's Degree
☐ Doctorate Degree (Ph.D., Ed.D., etc.)
☐ Other, please specify: ______________________________

15. What is your current occupation? (Check *one*)

- ☐ CLERICAL (such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent)
- ☐ CRAFTSPERSON (Such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter)
- ☐ FARMER, FARM MANAGER
- ☐ HOMEMAKER or HOUSEWIFE
- ☐ LABORER (such as construction worker car washer, sanitary worker, farm laborer)
- ☐ MANAGER, ADMINISTRATOR (such as sales manager, office manager, school administrator, buyer, restaurant manager, government official)
- ☐ MILITARY (such as career officer, enlisted man or woman in the Armed Forces)
- ☐ OPERATIVE (such as meat cutter, assembler, machine operator, welder, taxicab, bus or truck driver, gas station attendant)
- ☐ PROFESSIONAL (such as accountant, artist, member of the clergy, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress)
- ☐ PROPRIETOR OR OWNER (such as owner of a small business, contractor, restaurant owner)
- ☐ PROTECTIVE SERVICE (such as detective, police officer or guard, sheriff, firefighter)
- ☐ SERVICE (such as barber, beautician, practical nurse, private household worker, janitor, waiter or waitress)
- ☐ SALES (such as salesperson, advertising or insurance agent, real estate broker)
- ☐ TECHNICAL (such as draftsperson, medical or dental technician, computer programmer)

SECTION IV: ADDITIONAL COMMENTS

16. Briefly indicate recommendations you would make to help your school system increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Employer

Form Approved
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Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for
Research in Vocational Education,
The Ohio State University

Sponsored by:
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In cooperation with your State Department of Education and your Local School System.

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Your school system is helping in a national study on vocational education. You have been selected as a representative of your school system to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school system.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: **After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?**

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: **How important are the following factors for vocational education students in obtaining jobs?**

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: YOUR INVOLVEMENT IN VOCATIONAL EDUCATION AND JOB PLACEMENT

1. How often do you contact a representative of your local high school vocational education program when your business/industry has job openings for which vocational education graduates would qualify? (Check *one.*)

   ☐ We *always* contact the school

   ☐ We *usually* contact the school

   ☐ We *seldom* contact the school

   ☐ We *never* contact the school

   ☐ Don't know

2. How often does a representative of your local high school vocational education program contact you about job openings for which vocational education graduates are qualified? (Check *one*)

   ☐ Once a month

   ☐ Four times a year

   ☐ Twice a year

   ☐ Once a year

   ☐ Never

   ☐ Other, please specify: ______________________________

284

3. How often does a representative from your local high school vocational education program ask you about the job performance of their former vocational education students? (Please check *one* in *each* column.)

WITHIN the students' first year of work		AFTER the students' first year of work
☐	Once a month	☐
☐	Four times a year	☐
☐	Twice a year	☐
☐	Once a year	☐
☐	Never	☐
☐	Other, please specify: ____________________	☐

4. How often does a representative of your local high school vocational education program request information about competencies needed for the workers in your business/industry? (Check *one.*)

- ☐ Once a month
- ☐ Four times a year
- ☐ Twice a year
- ☐ Once a year
- ☐ Never
- ☐ Other, please specify: ____________________

5. How often does your business/industry participate in the following activities with your local vocational education program? (For each activity, check *one* box.)

	Very Often	Often	Sometimes	Rarely	Never
a. Career Days	☐	☐	☐	☐	☐
b. Cooperative education program	☐	☐	☐	☐	☐
c. Industry-school staff exchange	☐	☐	☐	☐	☐
d. Providing guest lecturer	☐	☐	☐	☐	☐
e. Assisting in vocational youth organizations or clubs	☐	☐	☐	☐	☐
f. Other, please specify: ____________________		☐	☐	☐	☐

SECTION II: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

6. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

7. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory council	☐	☐	☐	☐	☐
h. Other; please specify: ______________	☐	☐	☐	☐	☐

8. How often *should* a representative of your local high school vocational education program contact you about job openings for their former vocational education students? (Check *one*)

☐ Once a month
☐ Four times a year
☐ Twice a year
☐ Once a year
☐ Never
☐ Other, please specify: ______________________________

9. How often *should* a representative of your local high school vocational education program request information about competencies needed for the workers in your business? (Check *one*)

☐ Once a year
☐ Every two years
☐ Every three years
☐ Every five years
☐ Never
☐ Other, please specify: ______________________________

10. How do you rate your local high school vocational education programs in meeting your employment needs? (Please check *one* box in *each* column.)

Quality of Students' Skills		*Number* of Students Trained
☐	Excellent	☐
☐	Good	☐
☐	Fair	☐
☐	Poor	☐
☐	Does not meet your business/ industry's employment needs	☐

11. Of what importance are the following factors in your decision to employ a person for an entry level job? (For each factor, check the *one* appropriate box.)

	Very much Importance	Much Importance	Some Importance	Little Importance	Very Little Importance
a. Job interview performance	☐	☐	☐	☐	☐
b. Types of previous work experience	☐	☐	☐	☐	☐
c. Amount of previous work experiences	☐	☐	☐	☐	☐
d. Vocational education experience	☐	☐	☐	☐	☐
e. Specific types of occupational skills	☐	☐	☐	☐	☐
f. Scores on company administered tests	☐	☐	☐	☐	☐
g. High school grade records	☐	☐	☐	☐	☐
h. High school attendance	☐	☐	☐	☐	☐
i. Personal recommendations	☐	☐	☐	☐	☐
j. Health (physical)	☐	☐	☐	☐	☐
k. Ability to get along with people	☐	☐	☐	☐	☐
l. Work attitude	☐	☐	☐	☐	☐
m. Other, please specify: ______________________	☐	☐	☐	☐	☐

12. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ______________________	☐	☐	☐	☐	☐

13. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

14. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

15. On the following factors, how would you rate your high school vocationally-trained employees compared to your employees who have had no high school vocational education training? Your vocationally-trained employees are: (For each factor, check *one* appropriate box.)

	Much Better	Better	Same	Worse	Much Worse
a. Reading and interpretive skills	☐	☐	☐	☐	☐
b. Mathematical knowledge	☐	☐	☐	☐	☐
c. Safety knowledge and skills	☐	☐	☐	☐	☐
d. Personal relations skills	☐	☐	☐	☐	☐
e. Communication skills	☐	☐	☐	☐	☐
f. Work attitudes	☐	☐	☐	☐	☐
g. Supervisory skills	☐	☐	☐	☐	☐
h. Psychomotor skills	☐	☐	☐	☐	☐
i. Other, please specify: ____________________	☐	☐	☐	☐	☐

SECTION III: BACKGROUND INFORMATION
ABOUT YOUR BUSINESS

16. Which following category best describes the primary type of operation of your business/ industry? (Check *one.*)

☐ Agriculture
☐ Manufacturing
☐ Contract Construction
☐ Transportation
☐ Public Utilities
☐ Wholesale Trade

☐ Retail Trade
☐ Finance, Insurance & Real Estate
☐ Services & Miscellaneous
☐ Government: Federal
☐ Government: State
☐ Other; please specify:

____

17. Please indicate the total number of employees in your local business. (Check the appropriate box.)

☐ Less than 10 ☐ 10-99 ☐ 100-499 ☐ 500-999 ☐ 1000-2499 ☐ 2500 and over

18. Of your employees hired over the past two years, what is the approximate percentage of these employees who are former high school vocational education students?

_______ percent ☐ Don't know

19. If your business has a union organization, does a formal agreement for cooperation exist between the union's apprenticeship program and the local high school vocational education program? (Check *one*)

☐ Yes ☐ No ☐ Not applicable

SECTION IV: BACKGROUND INFORMATION

20. What is your date of birth? (Write the number on the blanks.)

_______/_______
Month Year

21. What is your sex?

☐ Female ☐ Male

22. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________________

23. What is your highest educational level? (Check *one*)

☐ Under 7 years of school
☐ 7 to 9 years of school
☐ 10 to 11 years of school (part high school)
☐ High school graduate
☐ 1 to 3 years college (also business school)
☐ Four-year college graduate
☐ Professional (beyond four-year college)

SECTION V: ADDITIONAL COMMENTS

24. Briefly indicate recommendations you would make to help your school system increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Current Student

Form Approved
FEDAC No. S 157
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CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
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Sponsored by:
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In cooperation with your State Department of Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: **After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting jobs?**

☐ **Very Good** ☑ **Good** ☐ **Neutral** ☐ **Poor** ☐ **Very Poor**

Example 2: **How important are the following factors for vocational education students in obtaining jobs?**

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

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INFORMATION ABOUT JOB PLACEMENT

SECTION I: YOUR VOCATIONAL EDUCATION EXPERIENCES

1. In which vocational education program are you currently enrolled? (Check *one.* If you are in more than one program, check the one in which you have taken the most courses.)

☐ Agriculture

☐ Business and Office

☐ Health

☐ Home Economics

☐ Distributive Education

☐ Trade and Industrial (e.g., welding, drafting, electronics, printing)

☐ Other, please specify: ______________________________

2. How long have you been enrolled in the above mentioned program? (Write the number on the blanks.)

____ year(s) ____ month(s)

3. How often do you use the following placement services in your high school?

	Very Often	Often	Sometimes	Rarely	Never
a. Help in deciding work interests and job goals	☐	☐	☐	☐	☐
b. Help in planning for education after high school	☐	☐	☐	☐	☐
c. Help in learning about job openings	☐	☐	☐	☐	☐
d. Help in preparing job applications	☐	☐	☐	☐	☐
e. Help in preparing for job interviews	☐	☐	☐	☐	☐
f. Help in getting a specific job	☐	☐	☐	☐	☐
g. Other, please specify: ______________________	☐	☐	☐	☐	☐

4. To which of the following vocational education student organizations do you belong? (Please check each organization you are in.)

☐ FFA (Future Farmers of America)

☐ FBLA (Future Business Leaders of America)

☐ HOSA (Health Occupations Student Association)

☐ FHA/HERO (Future Homemakers of America/Home Economics Related Occupations)

☐ DECA (Distributive Education Club of America)

☐ VICA (Vocational Industrial Club of America)

☐ Other, please specify: ______________________________

5. How often do you participate in the vocational education student organizations to which you belong?

		Very Often	Often	Sometimes	Rarely	Never
a.	FFA	☐	☐	☐	☐	☐
b.	FBLA	☐	☐	☐	☐	☐
c.	HOSA	☐	☐	☐	☐	☐
d.	FHA/HERO	☐	☐	☐	☐	☐
e.	DECA	☐	☐	☐	☐	☐
f.	VICA	☐	☐	☐	☐	☐
g.	Other, please specify: ______________________	☐	☐	☐	☐	☐

6. In *all* courses in which you are currently enrolled, your grades usually are: (Check *one.*)

☐ Outstanding ☐ Above average ☐ Average ☐ Below average ☐ Failing

7. In the *vocational education* courses in which you are currently enrolled, your grades usually are: (Check *one.*)

☐ Outstanding ☐ Above average ☐ Average ☐ Below average ☐ Failing

8. *While in high school,* do you or did you hold a part-time or full-time job, including work-study or cooperative education program (CO-OP)? (Check *one.*)

☐ Yes, please answer the following questions.

☐ No, skip to Question #9.

PLEASE CHECK THE KINDS OF WORK EXPERIENCES YOU HAVE HAD. FILL IN THE BLANKS FOR EACH WORK EXPERIENCE YOU CHECK. (LIST YOUR MOST RECENT THREE JOBS BEGINNING WITH YOUR *MOST* RECENT JOB FIRST.)

8a. ☐ *Work-Study:*

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

8b. ☐ *Cooperative Education Program (CO-OP):*

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

8c. ☐ *Part-time/Full-time Job,* other than work-study or cooperative education jobs:

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

9. In your vocational education classes, have you recevied instruction in the following areas? (Check *all* that apply.)

- ☐ Writing resumes
- ☐ Locating available jobs
- ☐ Filling out a job application
- ☐ Preparing for a job interview

Please go on to the next page.

SECTION II: YOUR PLANS AFTER HIGH SCHOOL

10. What do you plan to do after leaving high school (within six months after graduation)? (Check *all* that apply.)

    - ☐ a. Obtain a part-time job
    - ☐ b. Obtain a full-time job
    - ☐ c. Self-employment (or emplyment in family business)
    - ☐ d. Enroll in a vocational education program in a postsecondary school
    - ☐ e. Enroll in a nonvocational education program in a postsecondary school
    - ☐ f. Enter the military service
    - ☐ g. Other, please specify: ____________________

11. Of what help do you think knowledge of the following areas will be in securing a job?

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help	Don't Know
a. Writing resumes	☐	☐	☐	☐	☐	☐
b. Locating available jobs	☐	☐	☐	☐	☐	☐
c. Filling out a job application	☐	☐	☐	☐	☐	☐
d. Preparing for a job interview	☐	☐	☐	☐	☐	☐

Please go on to the next page.

IF YOU *DO* INTEND TO OBTAIN A JOB (FULL-TIME OR PART-TIME) AFTER LEAVING HIGH SCHOOL, ANSWER THE FOLLOWING QUESTION. IF NOT, SKIP TO QUESTION #13.

12. Of what help do you think each of the following will be to you as a source of information about job openings?

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help	Don't Know
a. Vocational education teacher	☐	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐	☐
c. School job placement service	☐	☐	☐	☐	☐	☐
d. Parents	☐	☐	☐	☐	☐	☐
e. Relatives other than parents	☐	☐	☐	☐	☐	☐
f. Friends	☐	☐	☐	☐	☐	☐
g. Former vocational students who have jobs	☐	☐	☐	☐	☐	☐
h. Newspapers	☐	☐	☐	☐	☐	☐
i. TV and radio	☐	☐	☐	☐	☐	☐
j. Public employment service	☐	☐	☐	☐	☐	☐
k. Cooperative education teacher	☐	☐	☐	☐	☐	☐
l. Private employment service	☐	☐	☐	☐	☐	☐
m. Other; please specify: ______________________	☐	☐	☐	☐	☐	☐

Please go on to the next page.

SECTION III: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

13. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

a. To place students as they leave school in a job related to their training ______

b. To provide the students with skills needed to obtain a job ______

c. To place students as they leave school in a job not necessarily related to their training ______

d. To create an awareness of the various jobs for which one might prepare ______

e. To provide an opportunity for students to explore various occupational areas ______

14. How would you rate your school's performance in providing the following placement activities to vocational education students? (For each of the following activities, please check the appropriate box.)

	Excellent	Good	Fair	Poor	Failing
a. Help in deciding work interests and job goals	☐	☐	☐	☐	☐
b. Help in planning for education after high school	☐	☐	☐	☐	☐
c. Help in learning about job openings	☐	☐	☐	☐	☐
d. Help in preparing job applications	☐	☐	☐	☐	☐
e. Help in preparing for job interviews	☐	☐	☐	☐	☐
f. Help in getting a specific job	☐	☐	☐	☐	☐
g. Other, please specify: ____________________	☐	☐	☐	☐	☐

15. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ______________________	☐	☐	☐	☐	☐

16. Of what help are the following factors in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Skills and competencies related to jobs	☐	☐	☐	☐	☐
c. Ability to get along with people	☐	☐	☐	☐	☐
d. Good work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other; please specify: ______________________	☐	☐	☐	☐	☐

17. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very Much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ______________________	☐	☐	☐	☐	☐

Please go on to the next page.

18. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

19. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

Please go on to the next page.

SECTION IV: BACKGROUND INFORMATION

20. What is your date of birth? (Write the number on the blanks.)

_______ / _______
Month Year

21. What is your sex?

☐ Female ☐ Male

22. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native

☐ Asian American or Pacific Islander

☐ Black, not of Hispanic Origin

☐ Hispanic

☐ White, not of Hispanic Origin

☐ Other; please specify: ______________________________

23. Please check the highest level of education your father (or male head of family) and mother (or female head of family) completed:

Father	Mother	
☐	☐	Under 7 years school
☐	☐	7 to 9 years of school
☐	☐	10 to 11 years of school (part high school)
☐	☐	High school graduate
☐	☐	1 to 3 years college (also business school)
☐	☐	Four-year college graduate
☐	☐	Professional (beyond four-year college)
☐	☐	Don't know

SECTION IV: BACKGROUND INFORMATION

20. What is your date of birth? (Write the number on the blanks.)

__________ / __________
Month Year

21. What is your sex?

☐ Female ☐ Male

22. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________________

23. Please check the highest level of education your father (or male head of family) and mother (or female head of family) completed:

Father	Mother	
☐	☐	Under 7 years school
☐	☐	7 to 9 years of school
☐	☐	10 to 11 years of school (part high school)
☐	☐	High school graduate
☐	☐	1 to 3 years college (also business school)
☐	☐	Four-year college graduate
☐	☐	Professional (beyond four-year college)
☐	☐	Don't know

SECTION V: ADDITIONAL COMMENTS

25. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

Former Student

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for Research in
Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of
Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting a job?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

This information is CONFIDENTIAL; no data will be associated with the name of an individual.

INFORMATION ABOUT JOB PLACEMENT

SECTION I: YOUR VOCATIONAL EDUCATION EXPERIENCES

1. In which vocational education program were you enrolled when you left high school? (Check *one.* If you were in more than one program, check the one in which you had the most courses.)

   ☐ Agriculture

   ☐ Business and Office

   ☐ Health

   ☐ Home Economics

   ☐ Distributive Education

   ☐ Trade and Industrial (e.g., welding, drafting, electronics, printing)

   ☐ Other, please specify: ______________________

2. How long were you enrolled in the above mentioned program? (Write the number on the blank.)

   ______ year(s) ______ month(s)

3. To which of the following vocational education student organizations do (did) you belong? (Please check *each* organization you are (were) in.)

   ☐ FFA (Future Farmers of America)

   ☐ FBLA (Future Business Leaders of America)

   ☐ HOSA (Health Occupations Student Association)

   ☐ FHA/HERO (Future Homemakers of America/Home Economics Related Occupations)

   ☐ DECA (Distributive Education Club of America)

   ☐ VICA (Vocational Industrial Club of America)

   ☐ Other, please specify: ______________________

4. How often do (did) you participate in the vocational education student organizations to which you belong(ed)?

		Very Often	Often	Sometimes	Rarely	Never
a.	FFA	☐	☐	☐	☐	☐
b.	FBLA	☐	☐	☐	☐	☐
c.	HOSA	☐	☐	☐	☐	☐
d.	FHA/HERO	☐	☐	☐	☐	☐
e.	DECA	☐	☐	☐	☐	☐
f.	VICA	☐	☐	☐	☐	☐
g.	Other, please specify: ______________________	☐	☐	☐	☐	☐

5. In *all* courses in which you were enrolled, your grades usually were: (Check *one)*

☐ Outstanding ☐ Above average ☐ Average ☐ Below average ☐ Failing

6. In the *vocational education* courses in which you were enrolled, your grades usually were: (Check *one*)

☐ Outstanding ☐ Above average ☐ Average ☐ Below average ☐ Failing

7. *While in high school,* did you hold a part-time or full-time job, including work-study or cooperative education program (CO-OP)? (Check *one*)

☐ Yes, answer the following questions.

☐ No, skip to Question #8.

PLEASE CHECK THE KINDS OF WORK EXPERIENCES YOU HAD WHILE IN HIGH SCHOOL. FILL IN THE BLANKS FOR EACH WORK EXPERIENCE YOU CHECK. (LIST YOUR MOST RECENT THREE JOBS BEGINNING WITH YOUR *MOST* RECENT JOB FIRST.)

7a. ☐ ***Work-Study:***

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

7b. ☐ ***Cooperative Education Program (CO-OP):***

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

7c. ☐ *Part-time/Full-time Job,* other than work-study or cooperative education jobs:

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour
		year(s)/month(s)	$. /hour

8. During high school, in your vocational education classes, did you receive instruction in the following areas? (Check *all* that apply.)

- ☐ Writing resumes
- ☐ Locating available jobs
- ☐ Filling out a job application
- ☐ Preparing for a job interview

Please go on to the next page.

SECTION II: YOUR EXPERIENCES AFTER HIGH SCHOOL

9. What did you do after leaving high school (within six months after graduation)? (Check *all* that apply.)

☐ a. Obtained a part-time job
☐ b. Obtained a full-time job
☐ c. Self-employment (or employed in family-owned business)
☐ d. Enroll in a vocational education program in a postsecondary school
☐ e. Enroll in a nonvocational education program in a postsecondary school
☐ f. Enter the military service
☐ g. Other, please specify: ______________________________

IF YOU *DID* OBTAIN A JOB (FULL-TIME OR PART-TIME) AFTER LEAVING HIGH SCHOOL, ANSWER THE FOLLOWING QUESTIONS. IF NOT, SKIP TO QUESTION #15.

10. Of what help was knowledge of the following areas in securing a job?

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help	Don't Know
a. Writing resumes	☐	☐	☐	☐	☐	☐
b. Locating available jobs	☐	☐	☐	☐	☐	☐
c. Filling out a job application	☐	☐	☐	☐	☐	☐
d. Preparing for a job interview	☐	☐	☐	☐	☐	☐

Please go on to the next page.

11. Of what help was each of the following to you as a source of information about job openings?

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help	Don't Know
a. Vocational education teacher	☐	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐	☐
c. School job placement service	☐	☐	☐	☐	☐	☐
d. Parents	☐	☐	☐	☐	☐	☐
e. Relatives other than parents	☐	☐	☐	☐	☐	☐
f. Friends	☐	☐	☐	☐	☐	☐
g. Former vocational education students who have jobs	☐	☐	☐	☐	☐	☐
h. Newspapers	☐	☐	☐	☐	☐	☐
i. TV and radio	☐	☐	☐	☐	☐	☐
j. Public employment service	☐	☐	☐	☐	☐	☐
k. Cooperative education teacher	☐	☐	☐	☐	☐	☐
l. Private employment service	☐	☐	☐	☐	☐	☐
m. Other; please specify: ______________	☐	☐	☐	☐	☐	☐

12. Please list the first three jobs you had after leaving high school. (List your *first* job *first.*)

Job Title	Average hours per week	Length of time at job (e.g., 1 yr/2 mo)	Wage per hour, before taxes
______________	________	________ year(s)/month(s)	$ ____ . ____ /hour
______________	________	________ year(s)/month(s)	$ ____ . ____ /hour
______________	________	________ year(s)/month(s)	$ ____ . ____ /hour

13. How related is or was your first job after high school to the occupational area you studied in high school? (Check *one.*)

☐ Same as area studied ☐ Somewhat related ☐ Slightly related ☐ Not at all related

SECTION III: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT IN YOUR HIGH SCHOOL

14. How well did your high school vocational education program prepare you for your first job? (Check *one*)

☐ Excellent preparation ☐ Good preparation ☐ Fair preparation ☐ Poor preparation

15. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.)

a. To place students as they leave school in a job related to their training ______

b. To provide the students with skills needed to obtain a job ______

c. To place students as they leave school in a job not necessarily related to their training ______

d. To create an awareness of the various jobs for which one might prepare ______

e. To provide an opportunity for students to explore various occupational areas ______

16. How would you rate your school's performance in providing the following placement activities to vocational education students? (For each of the following activities, please check the appropriate box.

	Excellent	Good	Fair	Poor	Failing
a. Help in deciding work interests and job goals	☐	☐	☐	☐	☐
b. Help in planning for education after high school	☐	☐	☐	☐	☐
c. Help in learning about job openings	☐	☐	☐	☐	☐
d. Help in preparing job applications	☐	☐	☐	☐	☐
e. Help in preparing for job interviews	☐	☐	☐	☐	☐
f. Help in getting a specific job	☐	☐	☐	☐	☐
g. Other, please specify: ________________	☐	☐	☐	☐	☐

17. How much responsibility *should* the following person/agency have in helping vocational education students to obtain jobs upon leaving high school? (For each of the following, check the appropriate box.)

	Very Much Responsibility	Much Responsibility	Some Responsibility	Little Responsibility	Very Little Responsibility
a. Vocational teacher	☐	☐	☐	☐	☐
b. Guidance counselor	☐	☐	☐	☐	☐
c. Cooperative education coordinator	☐	☐	☐	☐	☐
d. School job placement service	☐	☐	☐	☐	☐
e. Public employment agency	☐	☐	☐	☐	☐
f. Private employment agency	☐	☐	☐	☐	☐
g. Local vocational education advisory committee	☐	☐	☐	☐	☐
h. Other, please specify: ____________	☐	☐	☐	☐	☐

18. Of what help are the following factors in obtaining jobs? (For each of the following factors, check the appropriate box.)

	Very Much Help	Much Help	Some Help	Little Help	Very Little Help
a. Basic educational skills, such as writing, reading, and mathematics	☐	☐	☐	☐	☐
b. Skills and competencies related to jobs	☐	☐	☐	☐	☐
c. Ability to get along with people	☐	☐	☐	☐	☐
d. Good work attitudes	☐	☐	☐	☐	☐
e. Previous work experiences	☐	☐	☐	☐	☐
f. Involvement of employers with vocational education school	☐	☐	☐	☐	☐
g. Other, please specify: ____________	☐	☐	☐	☐	☐

19. In general, how much difficulty does each of the following factors pose for vocational education graduates when they are attempting to obtain jobs? (For each of the following factors, check the appropriate box.)

	Very much Difficulty	Much Difficulty	Some Difficulty	Little Difficulty	Very Little Difficulty
a. Students acquired job skills that are too specific	☐	☐	☐	☐	☐
b. Students do not have specific job skills	☐	☐	☐	☐	☐
c. Students must compete with experienced workers for jobs	☐	☐	☐	☐	☐
d. Students are unwilling to move to a different location for jobs	☐	☐	☐	☐	☐
e. No jobs available	☐	☐	☐	☐	☐
f. Job discrimination because of age	☐	☐	☐	☐	☐
g. Job discrimination because of sex	☐	☐	☐	☐	☐
h. Job discrimination because of racial/ethnic background	☐	☐	☐	☐	☐
i. Union restrictions on hiring	☐	☐	☐	☐	☐
j. Entry jobs offer only minimum wage	☐	☐	☐	☐	☐
k. Lack of transportation to jobs	☐	☐	☐	☐	☐
l. Lack of high school diploma	☐	☐	☐	☐	☐
m. Other; please specify: ____________________	☐	☐	☐	☐	☐

20. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

21. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

SECTION IV: BACKGROUND INFORMATION

22. What is your date of birth? (Write the number on the blanks.)

______ / ______
Month Year

23. What is your sex?

☐ Female ☐ Male

24. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native
☐ Asian American or Pacific Islander
☐ Black, not of Hispanic Origin
☐ Hispanic
☐ White, not of Hispanic Origin
☐ Other; please specify: ______________________

25. Please check the highest level of education your father (or male head of family) and mother (or female head of family) completed:

Father	Mother	
☐	☐	Under 7 years school
☐	☐	7 to 9 years of school
☐	☐	10 to 11 years of school (part high school)
☐	☐	High school graduate
☐	☐	1 to 3 years college (also business school)
☐	☐	Four year college graduate
☐	☐	Professional (beyond four-year college)
☐	☐	Don't know

26. Please check the kind of job your father and mother have. If you are not sure of the job category, please check "OTHER" and write the name of the job in the blank.

Father	Mother	
☐	☐	CLERICAL (such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent)
☐	☐	CRAFTSPERSON (such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter)
☐	☐	FARMER, FARM MANAGER
☐	☐	HOMEMAKER or HOUSEWIFE
☐	☐	LABORER (such as construction worker, car washer, sanitary worker, farm laborer)
☐	☐	MANAGER, ADMINISTRATOR (such as sales manager, office manager, school administrator, buyer, restaurant manager, government official)
☐	☐	MILITARY (such as career officer, enlisted man or woman in the Armed Forces)
☐	☐	OPERATIVE (such as meat cutter, assembler, machine operator, welder, taxicab, bus or truck driver, gas station attendant)
☐	☐	PROFESSIONAL (such as accountant, artist, member of the clergy, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress)
☐	☐	PROPRIETOR OR OWNER (such as owner of a small business, contractor, restaurant owner)
☐	☐	PROTECTIVE SERVICE (such as detective, police officer or guard, sheriff, firefighter)
☐	☐	SERVICE (such as barber, beautician, practical nurse, private household worker, janitor, waiter or waitress)
☐	☐	SALES (such as salesperson, advertising or insurance agent, real estate broker)
☐	☐	TECHNICAL (such as draftsperson, medical or dental technician, computer programmer)
☐	☐	OTHER: Father ______________________________ Mother ______________________________
☐	☐	DON'T KNOW

Parents

Form Approved
FEDAC No. S 157
App. Exp: 1/31/81
Approval Date: 4/16/80

CONFIDENTIAL:
FOR RESEARCH USE ONLY

INVESTIGATING THE CORRELATES OF JOB PLACEMENT IN VOCATIONAL EDUCATION

Conducted by:
The National Center for Research in
Vocational Education,
The Ohio State University

Sponsored by:
Office of Vocational and Adult Education
U.S. Education Department
In cooperation with your State Department of
Education and your Local School System.

Why we need your help . . .

Your school is helping in a national study on vocational education. You have been selected as a representative of your school to help with this job placement study. Your answers are very important, and will help to improve vocational education in your school.

How you can help . . .

On the next page, you will find questions about vocational education students finding jobs. Most questions can be answered by placing an "X" or a check mark "√" in the box, or by filling in the blanks. Please answer all items as accurately as possible. If you are unsure of a response, leave that question or that part of the question blank.

Example 1: After leaving high school, how do you compare vocational education students with the non-vocational education students in their chances of getting a job?

☐ Very Good ☑ Good ☐ Neutral ☐ Poor ☐ Very Poor

Example 2: How important are the following factors for vocational education students in obtaining jobs?

	Extremely Important	Very Important	Somewhat Important	A Little Important	Not at All Important
1. Appearance	☐	☐	☑	☐	☐
2. Grades	☐	☑	☐	☐	☐
3. Personality	☐	☐	☐	☑	☐

Please return the completed questionnaire in the postage-paid, pre-addressed envelope provided. Thank you for your help.

This information is CONFIDENTIAL; no data will be associated with the name of an individual.

INFORMATION ABOUT JOB PLACEMENT

SECTION I: YOUR OPINIONS CONCERNING VOCATIONAL EDUCATION AND JOB PLACEMENT

1. Please rank the following goals of secondary vocational education programs as to how important you consider each to be. Rank the *most* important goal as "1", the next most important "2", the next most important "3", the next most important "4", and the *least* important "5". (Place the number in the blank to the right of the goal.

   a. To place students as they leave school in a job related to their training ______

   b. To provide the students with competencies needed to obtain a job ______

   c. To place students as they leave school in a job not necessarily related to their training ______

   d. To create an awareness of the various jobs for which one might prepare ______

   e. To provide an opportunity for students to explore various occupational areas ______

2. How often do (did) *you* receive information (newsletters, phone calls from the school, etc.) about your local high school vocational education program?

   ☐ Once a month
   ☐ Four times a year
   ☐ Twice a year
   ☐ Once a year
   ☐ Never
   ☐ Other, please specify: ______________________________

6. When applying for the same job, how does a high school graduate with two years of vocational education training typically compare with a worker with two years experience who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

7. When applying for the same job, how does a high school vocational education graduate typically compare with a local high school graduate who has had no vocational education? The vocational education graduate's chances of getting the job are: (Check *one.*)

☐ Much better ☐ Better ☐ Same ☐ Worse ☐ Much worse ☐ Don't know

8. How would you rate the overall quality of the vocational education program at your local high school? (Check *one)*

☐ Very good ☐ Good ☐ Fair ☐ Poor ☐ Very poor

IF YOUR CHILD HAS *COMPLETED* A VOCATIONAL EDUCATION PROGRAM, PLEASE ANSWER QUESTION #9; OTHERWISE SKIP TO QUESTION #10.

9. How helpful were the job placement services your child received at the school? (Check *one*)

☐ Very much help ☐ Much help ☐ Some help ☐ Little help ☐ Very little help

10. What do (did) you want your son or daughter to do upon leaving the high school vocational education program? (Check *one.*)

☐ Obtain a part-time job
☐ Obtain a full-time job
☐ Self-employment
☐ Enroll in a vocational education program in a postsecondary school (technical school, college)
☐ Enroll in a non-vocational education program in a postsecondary school (college)
☐ Enter the military service
☐ Other, please specify: ______________________________

SECTION II: BACKGROUND INFORMATION

11. What is your date of birth? (Write the number on the blanks.)

_______ / _______
Month Year

12. What is your sex?

☐ Female ☐ Male

13. What is your ethnic origin? (Check *one*)

☐ American Indian or Alaskan Native

☐ Asian American or Pacific Islander

☐ Black, not of Hispanic Origin

☐ Hispanic

☐ White, not of Hispanic Origin

☐ Other; please specify: ______________________________

14. What is your highest educational level? (Check *one*)

☐ Under 7 years of school

☐ 7 to 9 years of school

☐ 10 to 11 years of school (part high school)

☐ High school graduate

☐ 1 to 3 years college (also business school)

☐ Four-year college graduate

☐ Professional (beyond four-year college)

SECTION III: ADDITIONAL COMMENTS

15. Briefly indicate recommendations you would make to help your school increase its job placement rates. (Please be specific.)

THANK YOU. End of Questionnaire.

☆ U.S. GOVERNMENT PRINTING OFFICE 1980-660-730

APPENDIX C

DEFINITION OF SOCIOECONOMIC VARIABLES FOR ANALYSIS OF EXISTING DATA

APPENDIX C

DEFINITION OF SOCIOECONOMIC VARIABLES FOR ANALYSIS OF EXISTING DATA

Variable Name	Definition
Percent of the work-force unemployed	1977-78 unemployment rate obtained from state reports (except for one state where the 1976-77 unemployment rate was used) by county.
Percent of the work force that is 18-19 year olds	Percentage of the work foce that was 1-19 years of age by county using 1970 Census data.
Health care as major industry	Whether or not health care was the leading industry in terms of employment by county, obtained from County Business Patterns 1977, U. S. Bureau of the Census.
Percent change in per capita income	Percentage of average annual change in per capita income from 1969 through 1974, information obtained from the City and County Data Book 1977, U.S. Bureau of the Census.
Manufacturing as a major industry	Whether or not manufacturing was the leading industry in terms of employment by county, obtained from County Business Patterns 1977, U.S. Bureau of the Census.

APPENDIX D

SELECTED TABLES FROM THE ANALYSIS OF EXISTING DATA AND THE ANALYSIS OF MAIL QUESTIONNAIRE DATA

TABLE A.1

RECODED VARIABLES - LEA ANALYSIS

Industry Code: Code: IC0009 To IC9099	Two-digit SIC codes were recoded into 10 sets of binaries. A list of these codes can be found in Appendix E.
Placement Rate: Code: PPLACE PPLACE01 PPLACE04 PPLACE07 PPLACE09 PPLACE14 PPLACE67	Placement rates were developed for Agriculture Distributive Education, Health, Home Economics, Business & Office, Trades & Industrial and Technical, and Total Programs. This was done by dividing numbers placed by numbers completing the programs. The total placement rate was calculated after removing the data for Home Economics. A single placement rate was developed for Trades & Industrial and Technical programs because several states had reported their data in this form.
Percent of Students in Cooperative Program: Code: PCOOP	This variable was developed by dividing the number of students enrolled in cooperative programs by the total number of students enrolled in vocational education programs. This result was multiplied by 100.
County Highway Miles Per Square Mile. Code: DENSMILE	This variable was developed by dividing total miles of highway in the county by the square miles of the county.
Industrial Mix (Size) Code: INDMIX	Industrial mix (size) was developed by dividing the total number of industries by the number of industries with over 250 employees.
Number of VE Students Completing T&I and Technical Programs: Code: OECD67CP	This variable was developed by adding the completers of Trades & Industrial and Technical programs.
Number of VE Programs in T&I and Technical areas: Code: NVEPG67	This variable was developed by adding the numbers of programs for T&I and Technical

TABLE A.2

LEA - MEANS, STANDARD DEVIATIONS, AND VARIABLE CODES FOR RERSEARCH QUESTION 1

REA	NUMBER OF CASES	VARIABLE NAME	MEANS	STANDARD DEVIATIONS	VARIABLE CODE	VARIAB VALU
EA	579	Percent of VE students placed in related jobs	28.91	18.36	PPLACE	
O*	584	Per capita income	4,044.89	36.75	PCI	
O	584	Percent change in per capita income 1969-74	82.92	29.10	PCHGPCPI	
O	584	Median education level male	11.01	1.44	MEDEM	
O	584	Median education level female	11.40	1.11	MEDEF	
EA	577	Number other races enrolled in VE 1977	381.29	1,605.45	NVEROT77	
EA	562	Number whites enrolled in VE 1977	994.23	2,544.41	NVEENW77	
O	582	Percent unemployed	6.39	2.39	PUNEMP	
O	517	Capital investment rate	5,969,556.00	14,199,793.00	CAPNV	
O	584	Industry growth 1976-77	105.00	6.43	INDCHG	
O	509	Level industrial mix	219.94	190.86	INDMIX	
O	584	Miles of highway per square mile	1.90	1.47	DENSMILE	
EA	569	Change in VE enrollment 77-78	184.93	251.70	CHANGVE	
EA	580	Percent VE Coop enrollment	10.73	13.09	PCOOP	
EA	500	Average total expenditures per VE enrollment	534.75	525.81	PVEEXP	

CO = county

TABLE A.2
(continued)

AREA	NUMBER OF CASES	VARIABLE NAME	MEANS	STANDARD DEVIATIONS	VARIABLE CODE	VARIABLE VALUE
CO	584	Agriculture as major industry	omitted from analysis		IC0009	1=yes, 0=no (used 3 times)
CO	584	Mining as a major industry	0.03	0.18	IC1014	1=yes, 0=no
CO	584	Construction as a major industry	omitted from analysis		IC1519	1=yes, 0=no (used 5 times)
CO	584	Manufacturing as major industry	0.75	0.43	IC2039	1=yes, 0=no
CO	584	Transportation as major industry	0.03	0.16	IC4049	1=yes, 0=no
CO	584	Wholesale trade as major industry	0.03	0.16	IC5059	1=yes, 0=no
CO	584	Banking, real estate, and insurance as a major industry	omitted from analysis		IC6069	1=yes, 0=no (used 1 time)
CO	584	Service as major industry	0.03	0.16	IC7079	1=yes, 0=no
CO	584	Health care as major industry	0.12	0.33	IC8089	1=yes, 0=no
CO	584	Unclassifiable major industry	omitted from analysis		IC9099	1=yes, 0=no (not used)
LEA	381	Percent dropout grades 9-12	6.47	3.84	PDROPOUT	
CO	571	Number new housing starts	2,243.02	3,310.46	NHOUSST	
LEA	517	Number of BOE programs	1.78	1.54	NVEPG14	
LEA	517	Number T&I amd Tech programs	6.63	6.29	NVEPG67	
CO	584	Percent population white	87.11	14.23	PPOPWHI	
CO	584	Percent population male	49.08	1.81	PPOPMAL	
CO	584	Percent population female	50.91	1.81	PPOPFEM	
CO	584	Percent population other than white	12.89	14.33	PPOPOTH	
CO	584	Population totals 1970	379,759.00	606,458.00	POPTOT70	

TABLE A.2
(continued)

AREA	NUMBER OF CASES	VARIABLE NAME	MEANS	STANDARD DEVIATIONS	VARIABLE CODE	VARIABLE VALUE
LEA	323	VE placement and job development services	0.78	0.41	TRANSCE	1=yes, 0=no
LEA	584	Labor demand	0.43	0.50	LABDEM	1=high, 0=low
CO	582	Total work force	1,419,021.00	3,405,984.00	WKFORC	
LEA	581	Number VE students completed	342.79	751.05	OETOTCP	
city	561	Number of other VE programs in area	2.05	5.74	NVESCH	
CO	583	Percent population change 1970-75	9.69	12.76	POPCHG	
LEA		Number VE Programs	14.19	11.84	NVEPETOT	
CO	583	Percent of males in work force	73.83	8.42	PWKFMALE	
CO	583	Percent females in work force	38.23	5.35	PWKFEM	
CO	575	Percent work force male age 18-19	61.15	11.71	PWKM1819	
CO	578	Percent work force female age 18-19	44.62	11.14	PWKF1819	
LEA	302	Number students completed Agri	33.84	37.07	OECDO1CP	
LEA	308	Number students completed DE	75.18	187.45	OECD04CP	
LEA	309	Number students completed Health	36.58	76.63	OECD07CP	
LEA	464	Number students completed BOE	88.55	227.89	OECD14CP	
LEA	581	Number students completed T&I/Tech	96.96	206.88	OECD67CP	
LEA	517	Number Agriculture programs	1.85	3.23	NVEPG01	
LEA	517	Number of DE programs	1.86	3.44	NVEPG04	
LEA	517	Number of Health programs	0.80	0.98	NVEPG07	
LEA	342	Percent of youth organizations	26.40	33.68	PYO	
LEA	584	Metro - Rural area	0.46	0.50	METRUR	1=rural 0=metro

TABLE A.3

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1

	PPLACE	PCI	PCHGPCPI	MEDEDR	MEDEDF	AVERO177	AVEERN77	PUNEMP	CAPINV	INDCHG	INDMIX	DENSMILE
PPLACE	1.0000											
PCI	-0.2719*	1.0000										
PCHGPCPI	0.1177*	-0.1163*	1.0000									
MEDEDR	-0.2558*	0.7147*	-0.2126*	1.0000								
MEDEDF	-0.3085*	0.6904*	-0.2137	0.9544*	1.0000							
AVERO177	0.0000	0.1076*	0.0450	0.0450	0.0318	1.0000						
AVEERN77	0.0605	0.2145*	0.0482	0.1467*	0.1088*	0.6738*	1.0000					
PUNEMP	-0.4123*	-0.1780*	-0.0839*	-0.0544	-0.0259	-0.0307	-0.0849*	1.0000				
CAPINV	-0.3316*	0.4802*	0.0135	0.2013*	0.2023*	-0.0109	-0.0368	0.0176	1.0000			
INDCHG	-0.0296	0.1793*	-0.0796*	0.2619*	0.2088*	0.0154	0.1377*	-0.0375	-0.2787*	1.0000		
INDMIX	0.2108*	-0.0092	0.0197	0.1729*	0.1627*	0.0040	0.0466	-0.1496*	0.2270*	0.[illegible]630*	1.0000	
DENSMILE	-0.3395*	0.4819*	-0.1743*	0.4406*	0.4061*	0.0486	0.1747*	0.0315	0.5687*	0.0774*	-0.1333*	1.0000
CHANGVE	-0.1290*	0.0340	-0.0709*	0.0260	0.0123	-0.0853*	-0.1321*	0.0391	0.0111	-0.0193	-0.0281	0.0360
PCOOP	-0.0930*	0.0215	-0.0830*	0.2940*	0.0301	0.0290	-0.0232	0.0520	0.1210*	0.0150	-0.0700	0.19[illegible]
PVEEXP	0.0304	0.0111	0.0052	0.0833*	0.1248*	0.0035	0.0298	0.0595	-0.0226	0.0045	0.1702*	-0.0427
TRANSC[illegible]	-0.2968*	0.0328	-0.0660	-0.1579*	-0.1874*	0.0895 *	0.1374*	0.2411*	0.1894*	-0.0882*	-0.1665*	0.3398*
LAB[illegible]A	0.2931*	0.0584	0.0391	0.1039*	0.0972*	-0.0073	0.0101	-0.5911*	-0.2681*	-0.0002	0.1590*	-0.1839*
M[illegible]ORC	-0.3409*	0.5507*	-0.0682*	0.2633*	0.2600*	-0.0557	-0.0529	0.0261	0.8087*	0.0600	-0.1562*	0.6133*
[illegible]ZTOTCP	-0.1081*	0.2749*	-0.0112	0.2122*	0.1871*	0.8285*	0.6880*	-0.0102	0.1312*	0.0726*	0.0059	0.2553*
AVESCH	0.0699*	0.2102*	-0.0323	0.1929*	0.1700*	0.3568*	0.2058*	-0.0931*	0.1768*	-0.0865*	-0.0507	0.1587*
PPOPCHG	0.0490	-0.0642	0.0093	0.0288	0.0455	0.0578	0.2492*	-0.0744*	-0.3235*	0.4160*	0.3959*	-0.1207*
AVEPG101	0.2562*	-0.0402	0.0115	0.0670	-0.0257	0.3207*	0. 2973*	0.0015	-0.0797*	0.0339	-0.0508	-0.0281
PWKFMALE	-0.1470*	0.5784*	-0.1282*	0.4753*	0.4648*	-0.0300	-0.0287	-0.1733*	0.2378*	0.0743*	-0.1556*	0.2581*
PWKFFEM	-0.0957*	0.4859*	-0.1109*	0.4483*	0.4447*	0.0797*	0.0328	-0.2405*	0.1606*	-0.0474	-0.1120*	0.1362*
PWKM1819	-0.2070*	0.3619*	-0.0965*	0.2754*	0.3059*	-0.0028	0.0358	0.0393	0.2046*	0.0449	-0.1314*	0.2952*
PWKF1819	-0.3572*	0.6034*	-0.1918*	0.5369*	0.5703*	0.0131	0.0717*	-0.0011	0.3689*	0.0863*	-0.1874*	0.5433*
OECD01CP	-0.0507	-0.0475	0.0308	-0.0408	-0.0580	0.2102*	0.2373*	0.1177*	-0.0272	-0.0121	-0.1118*	0.1002*
OECD04CP	-0.0653	0.2399*	0.0404	0.1467*	0.1234*	0.8883*	0.7565*	-0.0227	0.0630	0.0231	0.0010	0.1941*
OECD07CP	-0.1121*	0.2528*	0.0147	0.1741*	0.1732*	0.7507*	0.6678*	0.0142	0.0635	0.0690	0.0398	0.2870*
OECD14CP	-0.0312	0.2384*	0.0295	0.1531*	0.1257*	0.8594*	0.8010*	-0.0661	0.0503	0.0643	0.0055	0.1577*
OECD67CP	0.0171	0.2444*	0.0023	0.1760*	0.1425*	0.8521*	0.7424*	-0.0521	0.0617	0.0590	-0.0092	0.1653*
AVEPG01	0.1359*	-0.3670*	0.0545	-0.2210*	-0.3022	0.0098	0.0188	0.1295*	-0.2085*	0.0377	-0.0480	-0.0907*
AVEPG04	0.1458*	-0.1105*	0.0167	0.0455	-0.0086	0.1468*	0.0560	0.0879*	-0.0908*	0.0040	-0.0547	-0.0685
AVEPG07	0.2041*	0.1588*	-0.0204	0.1158*	0.0691	0.3157*	0.3767*	-0.0472	0.0737	0.0437	0.0577	-0.0708
PYD	0.4482*	-0.3828*	0.1693*	-0.3553*	-0.3837*	0.0705*	0.0278	-0.1877*	-0.3174*	0.0397	0.1841*	-0.4867*
METRUR	0.0501	-0.5149*	0.0954*	-0.4057*	-0.3566*	-0.1067*	-0.1568*	0.2983*	-0.3580*	-0.0856*	0.0330	-0.4274*
IC1014	-0.0073	-0.1000*	0.0934*	-0.1091*	-0.1227*	-0.0252	-0.0336	0.0984*	-0.0738*	0.0397	0.0613	-0.1378*
IC2039	-0.0047	-0.0523	-0.0667	-0.0637	-0.0815*	-0.1067*	-0.1676*	-0.0305	0.2089*	-0.09[illegible]9*	-0.2266*	0.1866*
IC4049	0.0966*	0.0210	0.0476	0.0295	0.0409	0.0069	0.0418	-0.1178*	-0.056[illegible]	0.0070	0.1076*	-0.0632
IC5059	-0.0073	-0.0287	0.0552	-0.0112	0.0070	0.0513	0.1189*	-0.0239	-0.0648	0.0856*	0.0346	-0.0461
IC7079	-0.0193	0.1008*	0.0372	0.0856*	0.0842*	-0.0008	0.1031*	-0.0086	-0.0736*	0.0084	0.1910*	-0.1461*
IC8099	-0.0374	0.1068	-0.0447	0.1179*	0.1337	0.1245*	0.1013*	0.0726*	-0.1222*	0.0442	0.0948 *	-0.0116
PCROPOUT	0.2329*	-0.0854*	0.0579	-0.0322	-0.0590	0.1885*	-0.0070	-0.2043*	-0.0248	-0.0714*	0.1163	-0.0818*
INDUSST	-0.2848*	0.7382*	-0.0760*	0.4267*	0.4010*	0.2142*	0.2441*	-0.0745*	0.7170*	0.1239*	-0.1483*	0.6981*
AVEPG14	0.0143	0.1031*	-0.0213	0.2220*	0.1385*	0.1057*	0.0741*	0.0055	0.1292*	0.1051*	-0.0692	0.2471*
AVEPG67	0.3200*	0.0741*	0.0296	0.0668	-0.0081	0.4130*	0.4350*	-0.1084*	-0.0687	-0.0100	-0.0366	-0.1067*
PPOPWHI	-0.0098	0.2837*	-0.1878*	0.4863*	0.4628*	-0.1412*	0.0152	0.0813*	-0.1838*	0.2668*	0.1455*	0.1290*
PPOPMAL	0.0067	-0.0610	0.0221	0.0311	0.0556	-0.0990*	-0.0658	-0.0247	-0.0851*	0.0065	0.2260*	-0.0857*
PPOPFEM	0.0180	0.0820*	-0.0123	-0.0157	-0.0279	0.0633	0.0425	0.0050	0.0851*	-0.0373	-0.1606*	0.0270
PPOPOTH	0.0102	-0.2863*	0.1880*	-0.4867*	-0.4641*	0.1385*	-0.0163	-0.0725*	0.1838*	-0.2650*	-0.1535*	-0.1298*
POP10170	-0.3043*	0.4583*	0.0114	0.2268*	0.2244*	0.0728*	0.0420	0.0037	0.9838*	-0.2468*	-0.1945*	0.5748*

* Variable codes may be found in Table 13.   Significant at .05 level.

TABLE A.3

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1
(continued)

	CHANGVE	PCOOP	PVEEXP	TRANSCE	LABOEM	WKFORCE	OEIOICP	AVESCH	PPOPCHG	AVEPGTOT	PWKFMALE	PWKFFEM
CHANGVE	1.0000											
PCOOP	-0.0490	1.0000										
PVEEXP	-0.1410*	0.2370*	1.0000									
TRANSCE	0.0451	-0.0250	0.1332*	1.0000								
LABOEM	-0.0870*	-0.1000*	-0.0542	-0.2492*	1.0000							
WKFORCE	0.0057	0.1580*	[illegible]	0.1673*	-0.3798*	1.0000						
OEIOICP	-0.0270	0.0480	-0.1044*	[illegible]	-0.0602	0.1121*	1.0000					
AVESCH	-0.0347	0.1270*	0.0160	[illegible]	0.0339	0.0774*	0.4417*	1.0000				
PPOPCHG	-0.0021	-0.0470	0.1475*	-0.0349	0.0783*	-0.7021*	0.0695*	-0.1173*	1.0000			
AVEPGTOT	-0.0318	0.1740*	0.0827*	0.2712*	-0.0855*	-0.0841*	0.3919*	0.2837*	-0.0358	1.0000		
PWKFMALE	0.0856	0.1050*	-0.0818*	-0.0408	0.0079	0.3494*	0.0709*	0.1221*	-0.3077*	0.0484	1.0000	
PWKFFEM	0.0334	0.1580*	-0.0028	-0.0472	[illegible]	[illegible]	0.1164*	0.2007*	-0.1710*	0.1055*	0.5291*	1.0000
PWKM1819	0.0144	0.0920*	-0.0581	0.0838*	-0.0812*	0.2675*	0.0589	0.0715*	-0.0473	-0.2077*	0.6071*	0.1435*
PWKF1819	0.0550	0.2290*	-0.0746	0.0778*	-0.0372	0.4568*	0.1695*	0.1744*	-0.0809*	-0.1824*	0.4777*	0.4388*
OECD01CP	0.1766*	-0.1420*	-0.2080*	0.1175*	-0.1198*	-0.0269	0.7945*	0.1847*	-0.0933*	0.2423*	-0.0050	0.0327
OECD04CP	-0.0627	-0.0210	-0.0409	0.1044*	-0.0619	0.0187	0.9496*	0.4132*	0.0770*	0.3018*	-0.0167	0.0870*
OECD07CP	-0.0807*	-0.0190	0.0290	0.1139*	-0.0536	0.0427	0.8524*	0.3130*	0.1469*	0.1542*	-0.0539	0.0406
OECD14CP	-0.0710*	0.0190	-0.0275	0.0810*	-0.0209	0.0168	0.9547*	0.4338*	0.1089*	0.4010*	0.0185	0.1139*
OECD87CP	-0.0618	0.0250	0.0272	0.1370*	-0.0137	0.0425	0.0117*	0.3761*	0.0451	0.5687*	0.0823*	0.1212*
AVEPG01	0.0225	-0.1334*	-0.1855*	-0.0413	-0.1056*	-0.2118*	-0.0123	-0.0534	0.0098	0.5044*	-0.1784*	-0.1111*
AVEPG04	-0.0424	-0.3020*	0.1263*	0.2308*	-0.1110*	-0.1105*	0.1839*	0.1489*	-0.0444	0.7866*	-0.0239	0.0569
AVEPG07	-0.0384	0.0460	0.1641*	0.2705*	-0.0334	0.0347	0.2971*	0.1932*	-0.0668	0.4723*	0.0696	0.0764*
PTO	-0.1282*	-0.1630*	-0.0871*	-0.4864*	0.1431*	-0.3537*	-0.1513*	-0.0844*	0.1083*	0.1603*	-0.3117*	-0.1843*
RETRUR	-0.0745	-0.1370*	0.0868*	-0.0483	-0.1384*	-0.3833*	-0.2277*	-0.2297*	0.0862*	-0.1127*	-0.3463*	-0.2944*
IC1014	-0.0143	-0.0940*	0.0108	-0.1599*	-0.0888*	-0.0778*	-0.0465	-0.0589	0.0136	-0.0845	-0.1648*	-0.2309*
IC2039	0.0347	0.0400	[illegible]	0.1029*	0.0134	0.1533*	-0.0674	-0.0086	-0.7677*	0.0793*	0.0634	0.0396
IC4049	-0.0775*	-0.0270	0.1112*	-0.0795*	0.0650	-0.0572	0.0023	-0.0170	0.1250*	0.0101	0.0470	0.0608
IC5059	-0.0840*	-0.0810*	0.0658*	0.0751*	0.0438	-0.0677	0.0206	-0.0297	0.1701*	-0.0690	-0.0710*	-0.0391
IC7079	[illegible]	0.0250	0.0132	-0.0479	0.0438	-0.0683*	0.0005	-0.0147	0.0544	-0.0517	0.0855*	0.0700*
IC[illegible]	0.0417	[illegible]	0.0508	-0.0126	-0.0609	-0.0461	0.1115*	0.0797*	0.1265*	-0.0480	-0.0252	0.0320
POROPOUT	-0.0677	0.0540	0.0115	-0.1828*	[illegible]	-0.0855*	0.0773*	0.1418*	0.0185	0.1034*	-0.0832	-0.0035
[illegible]	-0.0144	0.1830*	-0.0260	0.1545*	-0.1768*	0.7919*	0.3878*	0.2435*	-0.1367*	0.0228	0.3990*	0.2484*
AVEPG14	-0.0040	0.2680*	0.0268	0.0945*	-0.0750*	0.1505*	0.3785*	0.3048*	-0.0270	0.8455*	0.0965*	0.1053*
AVEPG67	-0.0441	0.1170*	0.1507*	0.2148*	0.0143	-0.0779*	0.3987*	0.3067*	-0.0790	0.8795*	0.1767*	0.1477*
PPOPWHI	0.0317	0.2050*	0.0977*	-0.3278*	0.0326	0.0176	0.0107	-0.0550	0.1928*	-0.0777*	0.2094*	-0.0411
PPOPMAL	0.0113	-0.082*	0.0506	-0.1709*	0.0093	-0.0189	-0.0960*	-0.1059*	0.1228*	-0.1280*	-0.0100	-0.0690*
PPOPFEM	0.0595	-0.087*	-0.0288	0.1708*	0.0136	0.0066	0.0620	0.1152*	-0.1140*	0.0805*	0.0160	0.0789*
PPOPOTH	-0.0301	-0.2050*	-0.1007*	0.3278*	-0.0357	-0.0193	-0.0115	0.0526	-0.1928*	0.0771*	-0.7094*	0.1854*
POP10170	0.0071	0.1370*	-0.0240	0.1853*	-0.7453*	0.7740*	0.7097*	0.7414*	-0.3068*	-0.0342	0.2407*	0.1854*

TABLE A.3

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1
(continued)

	PWXM1819	PWXF1819	OECD01CP	OECD04CP	OECD07CP	OECD14CP	OECD67CP	WVEPG01	WVEPG04	WVEPG07	PYO	METRUR
PWXM1819	1.0000											
PWXF1819	0.4955*	1.0000										
OECD01CP	-0.0802	-0.2538	1.0000									
OECD04CP	0.0446	0.1021*	0.3103*	1.0000								
OECD07CP	0.0736	0.1642*	0.2832*	0.8791*	1.0000							
OECD14CP	0.0170	0.0822*	0.2524*	0.9398*	0.8370*	1.0000						
OECD67CP	0.0290	0.1087*	0.2823*	0.8757*	0.7926*	0.9061*	1.0000					
WVEPG01	-0.2517*	-0.2979*	0.5438*	-0.0557	-0.1478*	-0.0110	0.0137	1.0000				
WVEPG04	-0.2442*	-0.2189*	0.0377	0.1436*	0.0318	0.2326*	0.2566*	0.3070*	1.0000			
WVEPG07	-0.0746*	-0.0187	0.0679	0.2666*	0.3663*	0.2407*	0.4740*	0.0112	0.2081*	1.0000		
PYO	-0.2885*	-0.4177*	0.2080*	-0.1131*	-0.2846*	-0.0300	-0.1114*	0.4493*	0.1358*	-0.0961*	1.0000	
METRUR	-0.1050*	-0.3387*	-0.0402	-0.1838*	-0.1902*	-0.1918*	-0.1951*	0.1764*	-0.0449	-0.0595	0.2366*	1.0000
IC1014	-0.1347*	-0.1402*	-0.0462	-0.0413	-0.0492	-0.0406	-0.0314	-0.0584	-0.0431	0.0039	0.0414	0.1663*
IC2039	-0.1320*	0.0047	0.1602*	-0.1132	-0.1126*	-0.0818*	-0.0895*	0.1408*	0.0786*	-0.0291	-0.0784	-0.0557
IC4049	0.0642	0.0215	-0.0579	-0.0146	0.0144	0.0138	0.0174	-0.0470	-0.0797	0.0296	0.0442	-0.0084
IC5059	0.0462	-0.0535	-0.0454	0.0306	0.0379	0.0728	0.0283	-0.0116	-0.0487	-0.0885*	0.0550*	-0.0794
IC7079	0.1345*	0.0070	-0.0077	0.0137	-0.0185	-0.0188	0.0340	-0.0536	-0.0618	0.0197	-0.0012	0.0127
IC8089	0.1148*	0.0904*	-0.1181	0.1592*	0.1436*	0.1255*	0.0994*	-0.1033*	-0.0377	0.0368	0.0107	-0.0297
DROPOUT	-0.0406	-0.0921*	-0.0777	0.1047	0.0704	0.2167*	0.0386	0.0370	0.0758	-0.0765	0.1590*	0.0047
BHOUSS1	0.2586*	0.5057*	0.0852	0.3263*	0.3676*	0.3247*	0.3298*	-0.2353*	-0.0397	0.1076*	-0.3452*	-0.4896*
WVEPG14	-0.0876*	0.0456	0.1361*	0.2755*	0.1788*	0.4074*	0.3255*	0.2619*	0.5184*	0.1938*	0.0247	-0.1927*
WVEPG67	-0.1131*	-0.1130*	0.1285*	0.3627*	0.1928*	0.4589*	0.6883*	0.1963*	0.5804*	0.5397*	0.0283	-0.1390*
PPOPWHI	0.2268*	0.3439*	-0.1622*	-0.0736	0.0093	-0.0473	-0.0011	-0.2203*	-0.0565	0.0259	-0.1253*	-0.0529
PPOPHAL	0.0405	0.0055	-0.1131*	-0.1570*	-0.1121*	-0.1422*	-0.0943*	-0.0998*	-0.1231*	-0.0279	-0.0412	0.0402
PPOPFER	-0.0129	0.0043	0.1163*	0.1470*	0.0610	0.1350*	0.0686*	0.0591	0.0556	0.0242	0.0399	-0.0522
PPOPOTH	-0.2283*	-0.3492*	0.1565*	0.0737	-0.0123	0.0450	0.0003	0.2237*	0.0532	-0.0239	0.1329*	0.0568
POP10170	0.2160*	0.3799*	0.0524	0.1455*	0.1612*	0.1358*	0.1510*	-0.1934*	-0.0582	0.0341	-0.3040*	-0.3703*

TABLE A.3

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1
(continued)

	IC1014	IC2039	IC4049	IC5059	IC7079	IC8089	DROPOUT	NHOUSST	NVEPG14	NVEPG67	PPOPWHI	PPOPNAL
METRUR												
IC1014	1.0000											
IC2039	-0.3247*	1.0000										
IC4049	-0.0316	-0.2894*	1.0000									
IC4059	-0.0316	-0.2894*	-0.0282	1.0000								
IC7079	-0.0316	-0.2894*	-0.0282	-0.0282	1.0000							
IC8089	-0.0701*	-0.0414*	-0.0624	-0.0624*	-0.0624	1.0000						
PDROPOUT	0.0011	-0.0209	0.1040*	0.1097*	-0.0292	-0.0440	1.0000					
NHOUSST	-0.0978*	0.1358*	-0.0309	-0.0636	-0.0584	-0.0280	-0.0376	1.0000				
NVEPG14	-0.0865*	0.1113*	0.0296	-0.0667	-0.0975*	-0.0376	0.0808*	0.2194*	1.0000			
NVEPG67	-0.0085	-0.0054	0.0598	-0.0540	-0.0142	-0.0706	0.0813*	0.0491	0.4317*	1.0000		
PPOPWHI	0.0770*	-0.1342*	0.0070	-0.0040	0.0430	0.1289*	-0.1183*	0.0429	0.0476	-0.0411	1.0000	
POPNAL	0.1166*	-0.1727*	0.0787*	0.0486	0.2365*	-0.0261	-0.0389	-0.1074*	-0.0613	-0.1048*	0.1742*	1.0000
POPFEN	-0.0828*	0.0855*	-0.0633	-0.0387	-0.1861*	0.0892*	0.0674	0.0537	0.0098	0.0926*	-0.1347*	-0.7951*
PPOPOTH	-0.0768*	0.1349*	-0.0076	0.0032	-0.0432	-0.1288*	0.1199*	-0.0455	-0.0410	0.0377	-0.9916*	-0.1737*
POP10170	-0.0770*	0.1768*	-0.0528	-0.0606	-0.0585	-0.0[illegible]*	-0.0155	0.7315*	0.1470*	-0.0197	-0.1743*	-0.1127*

TABLE A.3

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 1
(continued)

	PPCPFEM	PPCPOTH	PCP10170
PCPFEM	1.0000		
PPCPOTH	0.131*	1.0000	
PCP10170	0.0730	0.1700*	1.0000

TABLE A.4

LEA - MEANS, STANDARD DEVIATION, AND VARIABLE CODES FOR RESEARCH QUESTION 2

Variable Name	Mean	Standard Deviation	Variable Code
Percent placed in Agriculture	15.65	23.88	PPLACE01
Percent placed in D.E.	17.32	22.71	PPLACE04
Percent placed in Health	15.76	25.08	PPLACE07
Percent placed in H.E.	7.39	15.09	PPLACE09
Percent placed in B.O.E.	19.65	20.26	PPLACE14
Percent placed in T&I and Technical	32.02	22.48	PLACE67
Metro (0) or Rural (1) area	0.46	0.50	METRUR
Industrial Mix	219.94	190.86	INDMIX
Agriculture as major co. industry	omitted from analysis		IC0009
Mining as the major co. industry	0.03	0.18	IC1014
Construction as the major co. industry	omitted from analysis		IC 1519
Manufacturing as the major co. industry	0.75	0.43	IC2039
Transportation and Utilities as the major co. industry	0.0[illegible]	0.16	IC4049
Wholesale Trades as the major co. industry	0.03	0.16	IC5059
Banking, Real Estate, and Insurance as the major co. industry	omitted from analysis		IC6069
Service as the major co. industry	0.03	0.16	IC7079
Health Care as the major co. industry	0.12	0.33	IC8089
Unclassifiable major co. industry	omitted from analysis		IC9099
Percent of unemployed work force	6.39	2.39	PUNEMP
Percent of males in work force	73.83	8.42	PWKFMALE
Percent of females in work force	38.24	5.35	PWKFFEM
Average number of V.E. students enrolled in Agriculture	164.22	853.57	DECDO1EN
Average number of V.E. students enrolled in D.E.	211.92	2503.08	DECDO4EN
Average number of V.E. students enrolled in Health	28.26	72.17	DECDO7EN
Average number of V.E. students enrolled in Home Economics	413.34	821.56	DECDO9EN
Average number of V.E. students enrolled in B.O.E.	285.79	845.18	DECD14EN
Average number of V.E. students enrolled in Technical	1.90	15.22	DECD16EN
Average number of V.E. students enrolled in T & I	294.10	735.65	DECD17EN
Number of V.E. students enrolled	1371.75	3113.36	DETOTEN
Percent in V.E. youth organizations	26.40	33.69	PYO
Percent of V.E. students placed in related jobs	28.90	18.37	PPLACE
Percent of school dropouts 9-12	6.47	3.64	PDROPOUT

TABLE A.5

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 2

	PPLACE01	PPLACE04	PPLACE07	PPLACE09	PPLACE14	PLACE67	METRUR	INDMIX	IC1014	IC2039
PPLACE01	1.0000									
PPLACE04	0.2815*	1.0000								
PPLACE07	0.1099*	0.2043*	1.0000							
PPLACE09	0.2094*	0.2416*	0.3076*	1.0000						
PPLACE14	0.2666*	0.4342*	0.2824*	0.3908*	1.0000					
PLACE67	0.1261*	0.1795*	0.3541*	0.2342*	0.2970*	1.0000				
METRUR	0.1557*	-0.0679*	-0.0038	0.0028	-0.0510	0.0381	1.0000			
INDMIX	0.0407	0.1516*	0.1046*	0.1085*	0.2190*	0.1058*	0.0330	1.0000		
IC1014	-0.0529	-0.0824	-0.0528	-0.0657	-0.0817*	0.0577	0.1653*	0.0613	1.0000	
IC2039	0.0584	0.0173	0.0380	-0.0176	-0.0378	-0.0082	-0.0557	-0.2266*	-0.3247*	1.0000
IC4049	-0.0097	0.0426	0.0462	0.1038*	0.0903*	0.0626	-0.0084	0.1026*	-0.0316	-0.2894*
IC5059	0.0475	0.0430	-0.0386	0.0040	0.1518*	-0.0555	-0.0294	0.0346	-0.0316	-0.2894*
IC7079	-0.0933*	-0.0062	-0.0159	-0.0197	-0.0215	-0.0488	0.0127	0.1910*	-0.0316	-0.2894*
IC8089	-0.0421	-0.0291	-0.0186	0.0269	-0.0313	-0.0159	-0.0297	0.0946*	-0.0701*	-0.6414*
PUNEMP	-0.0025	-0.0578	-0.1374*	-0.1418*	-0.2014*	-0.3191*	0.2983*	-0.1496*	0.0984*	-0.0305
PWKFMALE	-0.1715*	0.0081	-0.0491	-0.0120	-0.1579*	-0.0738*	-0.3463*	-0.1556*	-0.1646*	0.0634
PWKFFEM	-0.1524*	0.0752*	-0.0186	0.0887*	-0.0670	-0.0500	-0.2944*	-0.1120*	-0.2309*	0.0396
DECD01EN	0.0357	-0.0196	-0.0067	0.0096	-0.0147	-0.0187	0.0705*	0.0395	-0.0161	-0.0697*
DECD04EN	-0.0348	-0.0281	-0.0133	-0.0163	-0.0433	-0.0439	0.0188	0.0429	-0.0108	-0.0889*
DECD07EN	-0.0703*	0.0517	0.1202*	0.0700*	0.0344	-0.0470	0.1703*	-0.0133	-0.0462	-0.0211
DECD09EN	-0.0301	-0.0408	0.0773*	-0.0133	-0.0716*	-0.0097	-0.2091*	-0.0064	-0.0392	-0.1017*
DECD14EN	-0.0054	0.0386	0.1349*	0.0958*	0.0172	0.0251	-0.1619*	0.0191	-0.0152	-0.1544*
DECD16EN	-0.0016	0.1254	0.0155	0.1727*	0.0806*	0.0307	-0.0697*	0.0125	0.0174	-0.1239*
DECD17EN	-0.0293	0.0424	0.1428*	0.0873*	0.0445	0.0124	-0.1748*	-0.0043	-0.0244	-0.1120*
DETOTEN	-0.0186	0.0057	0.1329*	0.0555	-0.0137	0.0285	-0.1786*	0.0076	-0.0287	-0.1383*
PYO	0.3755*	0.2010*	0.1306*	0.1348*	0.3493*	0.7300*	0.2366*	0.1841*	0.0414	-0.0784
PPLACE	0.2644*	0.3074*	0.4635*	0.2755*	0.4651*	0.7989*	0.0501	0.2189*	-0.0073	-0.0047
PDROPOUT	0.1382*	0.2425*	0.0003	0.1316*	0.2644*	0.0880*	0.0047	0.1163*	0.0011	-0.0209

* Significant at .05 level.

TABLE A.5

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 2
(continued)

	IC4049	IC5059	IC7079	IC8089	PUNEMP	PWKFMALE	PWKFFEM	DECD01EN	DECD04EN	DECD07EN
IC4049	1.0000									
IC5059	-0.0282	1.0000								
IC7079	-0.0282	-0.0282	1.0000							
IC8089	-0.0624	-0.0624	-0.0624	1.0000						
PUNEMP	-0.1178*	-0.0239	-0.0086	0.0726	1.0000					
PWKFMALE	0.0470	-0.0710*	0.0855	-0.0252	-0.1233*	1.0000				
PWKFFEM	0.0608	-0.0391	0.0700*	0.0320	-0.2405*	0.5291*	1.0000			
DECD01EN	-0.0052	0.0149	0.0039	0.0960*	0.0845*	-0.0606	-0.0607	1.0000		
DECD04EN	-0.0072	-0.0043	0.0045	0.1283*	0.0776	-0.0036	-0.0234	0.9685*	1.0000	
DECD07EN	-0.0264	-0.0359	-0.0038	0.0769	-0.0063	0.0794*	0.0886*	0.0766	0.0817*	1.0000
DECD09EN	-0.0258	0.0592	0.0941*	0.0666	-0.0773*	0.0947	0.1264*	0.0621	0.0886*	0.6292*
DECD14EN	0.0102	0.0651	0.0478	0.1480*	-0.0804*	-0.0139	0.0841*	0.0900*	0.0953*	0.5779*
DECD16EN	0.125[illegible]	-0.0155	-0.0210	0.1141*	-0.1300*	0.0766	0.1177*	-0.0199	0.0009*	0.0677
DECD17EN	0.0072	0.0438	0.0581	0.1075*	-0.0477	0.0260	0.0890*	0.0762*	0.0932*	0.7551*
DETOTEN	-0.0042	0.0520	0.1141*	0.1062*	-0.0853*	0.0425	0.1071*	0.0868*	0.0994*	0.8464*
PYO	0.0442	0.0950*	-0.0012	0.0102	-0.1877*	-0.3112*	-0.1843*	0.0325	-0.0450	-0.1726*
PPLACE	0.0966*	-0.0073	-0.0193	-0.0374	-0.4123*	-0.1476*	-0.0957*	-0.0179	-0.0547*	-0.0363
PDROPOUT	0.1040*	0.1097*	-0.0292	-0.0440	-0.2043*	-0.0832	-0.0035	-0.0664	-0.0610	0.0756

TABLE A.5

LEA - CORRELATION MATRIX FOR RESEARCH QUESTION 2
(continued)

	DECD09EN	DECD14EN	DECD16EN	DECD17EN	DETOTEN	PYO	PPLACE	PDROPOUT
DECD09EN	1.0000							
DECD14EN	0.7220*	1.0000						
DECD16EN	-0.0237	0.1425*	1.0000					
DECD17EN	0.7419*	0.8505*	0.0521	1.0000				
DETOTEN	0.9171*	0.9054*	0.0576	0.8953*	1.0000			
PYO	-0.0984*	0.0030	0.0289	-0.0419	-0.0303	1.0000		
PPLACE	-0.0045	0.0338	0.0570	0.0308	0.0465	0.4482*	1.0000	
PDROPOUT	-0.0125	0.1019*	0.2045*	0.0698	0.0143	0.1580*	0.2329*	1.0000

TABLE A.6

LEA - SOCIAL-DEMOGRAPHIC DESCRIPTIONS

Variable Code	Variable Description
PUNEMP	Percent of unemployed workers
METRUR	Metro-rural designation 1 = rural, 0 - metro
PPOPCHG	Percent population change
MEDEDM	Median education level males
MEDEDF	Median education level females
PPOPWHI	Percent of population white nonHispanic
PPOPOTH	Percent of population of other than white not Hispanic origin
PPOMAL	Percent of population males
POPFEM	Percent of population females
PWKFMALE	Percent of work force males
PWKFFEM	Percent of work force females
PWKM1819	18 to 19 year old males as a percent of the work force
PWKF1819	18 to 19 year old females as a percent of the work force
DENSMILE	Miles of highway per county square mile

TABLE A.7

LEA - SOCIAL DEMOGRAPHIC VARIABLES -

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS

	PLACE	PUNEMP	METRUR	PPOPCHG	MEDEDM	MEDEDF	PPOPWHI	PPOPOTH	PPOPMAL	PPOPFEM	PWKFMALE	PWKFFEM	PWKM1819	PWKF1819	DENSMILE
MEANS	29.06	6.32	0.45	95.83	11.03	11.38	86.81	13.18	49.09	50.91	73.9	38.3	8.11	4.46	3.91
STANDARD DEVIATION	18.40	22.78	0.50	12.75	1.45	1.12	14.31	14.31	1.82	1.82	8.32	5.80	1.18	1.11	1.47
PPLACE	1.00000														
PUNEMP	−0.40283	1.00000													
METRUR	0.05915	0.28701	1.00000												
PPOPCHG	0.08349	−0.10033	0.07909	1.00000											
MEDEDM	−0.26005	−0.03768	−0.40570	0.03187	1.00000										
MEDEDF	−0.30764	−0.02795	−0.36271	0.04448	0.95582	1.0000									
PPOPWHI	−0.00032	0.05641	−0.06867	0.18999	0.49253	0.46280	1.00000								
PPOPOTH	0.00032	−0.05641	0.06867	−0.18999	−0.49253	−0.46280	−1.00000	1.00000							
PPOPMAL	0.00052	−0.02307	0.04626	0.12713	0.02311	0.04201	0.16128	−0.16128	1.00000						
PPOPFEM	0.00052	0.02307	−0.04626	−0.12713	−0.02311	−0.04201	−0.16128	0.16128	−1.00000	1.00000					
PWKFMALE	[illegible].16704	−0.07272	−0.32998	−0.30[illegible]35	0.47235	0.47199	0.23287	−0.23287	−0.01025	0.01025	1.00000				
PWKFFEM	−[illegible]951	−0.21959	−0.28343	−0.16[illegible]46	0.45401	0.48053	−0.01673	0.01673	−0.06833	0.06833	0.51520	1.00000			
PWKM1819	−0.[illegible]91	0.04528	−0.17589	−0.05138	0.27304	0.30600	0.23286	−0.23286	0.03348	−0.03348	0.60[illegible]64	0.13380	1.00000		
PWKF1819	[illegible]52	0.00011	−0.33520	−0.09273	0.53702	0.57225	0.34718	−0.34718	−0.00397	0.00397	0.48500	0.45325	0.49539	1.00000	
DENSMILE	−0.34[illegible]	0.05495	−0.41778	−0.12416	0.44016	0.40877	0.13624	−0.13624	−0.06800	0.06800	0.24958	0.13560	0.29312	0.53931	1.00000

TABLE A.8

REDUCED MODEL: LEA SOCIAL-DEMOGRAPHIC VARIABLES, DEPENDENT VARIABLE - PPLACE

Variables	B	Se	F
PUNEMP	-0.0335	0.0272	150.959
MEDEDF	-0.0339	0.0726	30.138
PPOPWHI	-0.2980	0.0500	36.085
PWKF1819	-0.0366	0.0074	23.96
DENSMILE	-1.6951	0.5084	11.12
(constant) 89.3735			

R^2 = .367 df - 5,561 p<.01

TABLE A.9

EDUCATIONAL VARIABLE DESCRIPTION

Variable Code	LEA - Variable Description - Education
PCOOP	Percent of students enrolled in V.E. coop programs
TRANSCE	Guidance and Job Development services
PDROPOUT	Dropout rate, grades 9-12
OETOTCP	Total number of students completing V.E.
VEPSEX	V.E. expenditures per student enrolled
POE1EN	Percent enrolled in Agriculture
POE04EN	Percent enrolled in D.E.
POE07EN	Percent enrolled in Health
POE09EN	Percent enrolled in Home Economics
POE14EN	Percent enrolled in B.O.E.
POE67EN	Percent enrolled in T. & I. and Technical
PYO	Percent of enrollment in youth organizations
PWHITVE	Percent of V.E. student enrollment white
POTHVE	Percent of V.E. student enrollment nonwhite
PWHITELEA	Percent of LEA enrollment white
POTHLEA	Percent of LEA enrollment nonwhite
NVESCH	Number of other V.E. schools in district
NLEAEN7	Total LEA enrollment 1977

TABLE A.10

LEA - EDUCATION VARIABLES -

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS

	PPLACE	PCOOP	TRANSCE	PDROPOUT	DE101CP	WEPSEX	POE01EN	POE04EN	POE07EN	POE09EN
MEANS	16.62	12.74	0.73	60.45	370.63	469.49	10.37	10.06	3.19	36.99
STANDARD DEVIATION	12.26	10.97	0.45	34.79	528.36	231.58	17.12	10.78	4.70	23.06
PPLACE	1.00000									
PCOOP	0.02385	1.00000								
TRANSCE	-0.40690*	0.06279	1.00000							
PDROPOUT	0.19345*	0.04853	-0.16369*	1.00000						
DE101CP	-0.07338	0.02493	0.20965*	0.13545*	1.00000					
WEPSEX	0.03005	0.15319*	0.01634	0.05437	-0.05847	1.00000				
POE01EN	-0.03684	-0.20055*	-0.22649*	-0.06078	-0.27561*	-0.27266*	1.00000			
POE04EN	-0.00653	0.50301*	-0.00257	-0.07252	0.01452	0.04672	-0.16717*	1.00000		
POE07EN	-0.14551*	0.09604	0.16804*	-0.09878	0.06872	0.23669*	-0.24737*	0.00737	1.00000	
POE09EN	-0.33872*	-0.11490*	0.42469*	-0.29627*	0.17636*	-0.35034*	-0.21080*	-0.22300*	-0.02084	1.00000
POE14EN	0.45802*	0.09514	-0.44388*	0.30307*	-0.01313	0.12348*	-0.20770*	0.08374	-0.05071	-0.05970
POE67EN	0.08427	-0.08176	0.04802	0.20047*	-0.07682	0.47564*	-0.33709*	-0.23015*	0.04357	-0.38965*
PYO	0.34156*	-0.08707	-0.45136*	0.14445*	-0.15994*	0.11144*	0.46993*	-0.05895	-0.13330*	-0.47810*
PWHITVE	-0.07566	-0.00270	-0.11730*	-0.33735*	-0.11029*	-0.22342*	0.12371*	0.00078	-0.01882	0.20035*
POTHVE	0.07566	0.00270	-0.11730*	0.33735*	0.11029*	0.22342*	-0.12371*	-0.00078	0.01882	-0.20035*
PWHITLEA	-0.10020*	-0.04883	0.10973*	-0.38483*	-0.14100*	-0.23990*	0.17648*	-0.01384	-0.02338	0.22858*
POTHLEA	0.10020*	0.04883	-0.10973*	0.38483*	0.14100*	0.23990*	-0.12648*	0.01384	0.02338	-0.22858*
AVESCH	0.00037	0.08466	0.06749	0.10220*	0.49061*	0.05107	-0.15889*	0.03274	0.04086	0.01107
ALEAEN7	0.08999	0.04780	0.07347	0.26237	0.80571*	-0.00369	-0.15075*	0.04790	0.03038	-0.01335

TABLE A.10
(continued)

LEA - EDUCATION VARIABLES -

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS

	POE14EN	POE67EN	PYO	PWHITVE	POTHVE	PWHITLEA	POTHLEA	BVESCH	MLEAEN7
MEANS	16.6035	22.8000	19.0597	89.6111	10.3889	88.9917	11.0083	7.2146	7733.3046
STANDARD DEVIATION	16.9070	17.2241	29.3013	19.6133	19.6133	18.4413	18.4413	7.0807	17333.7475

POE14EN	1.00000								
POE67EN	-0.01136	1.00000							
PYO	0.20543 *	-0.03390	1.00000						
PWHITVE	-0.20111 *	-0.11028 *	-0.16741*	1.00000					
POTHVE	0.20111 *	0.11028 *	0.16741*	-1.00000	1.00000				
PWHITLEA	-0.20865 *	-0.13336 *	-0.16334*	0.92056	-0.92056	1.00000			
POTHLEA	0.20865 *	0.13336 *	0.16334*	-0.92056	0.92056	-1.00000	1.00000		
BVESCH	0.08417	0.04806	-0.07535	-0.15928*	0.15928*	-0.18904*	0.18904*	1.00000	
MLEAEN7	0.10923 *	0.02223	-0.03148	-0.74319*	0.74319*	-0.78417*	0.78417*	0.56460*	1.00000

TABLE A.11

REDUCED MODEL

LEA - EDUCATIONAL VARIABLES

DEPENDENT VARIABLES = PPLACE

Variables	B	Se	F
TRANSCE	-5.888	1.827	10.385
POE01EN	-0.100	0.049	4.220
POE14EN	0.194	0.049	15.624
PYO	0.982	0.029	11.223
(constant)	16.858		

$R^2 = 0.295$ df = 4, 243 $p < .01$

TABLE A.12

LEA - GENERAL ANALYSIS OF SIGNIFICANT VARIABLES - MEANS, STANDARD DEVIATIONS, INTERCORRELATIONS

	PPLACE	TRANSCE	POEOIEN	POE14EN	PYO	LABDEN	INDMIX	PCI	PUNEMP	MEDEDF	PPOPWHI	PWKF1819	DENSMILE
Means	16.3473	0.7522	8.[illegible]879	16.0005	15.9005	0.3970	196.7846	4844.7281	67.7652	12.10957	92.6199	5.263043	2.7484
Standard Deviation	12.1018	0.4327	[illegible]5.4382	16.0183	24.5878	0.4861	131.4028	769.3467	21.7313	0.35290	8.8562	0.730614	1.2983
PPLACE	1.00000												
TRANSCE	-0.38505	1.00000											
POEOIEN	-0.03641	-0.21767	1.00000										
POE14EN	0.43536	-0.41504	-0.20561	1.00000									
PYO	0.30593	-0.40753	0.49509	0.19473	1.00000								
LABDEN	0.32439	-0.28829	0.13934	0.30582	0.33223	1.00000							
INDMIX	0.27258	-0.33748	0.04272	0.36203	0.39276	0.15921	1.00000						
PCI	-0.01308	0.14308	-0.31216	0.08158	-0.18487	-0.14455	-0.09375	1.00000					
PUNEMP	-0.36085	0.23017	0.18171	-0.38408	-0.19228	-0.52411	-0.12280	-0.35942	1.00000				
MEDEDF	0.13374	-0.16744	-0.08816	0.14137	0.08566	0.30544	0.18680	0.49056	-0.37068	1.00000			
PPOPWHI	0.24483	-0.27524	0.23410	0.09208	0.23215	0.20047	0.35302	-0.17398	0.06430	0.28469	1.00000		
PWKF1819	-0.17657	0.31472	-0.10003	-0.26726	-0.24240	-0.12564	-0.44705	0.37579	-0.11050	-0.01780	-0.14799	1.00000	
DENSMILE	-0.39842	0.47205	-0.22837	-0.38215	-0.48079	-0.48842	-0.47079	0.58938	0.07501	-0.08379	-0.48838	0.54482	1.00000

TABLE A.13

REDUCED MODEL

LEA - GENERAL ANALYSIS

DEPENDENT VARIABLES = PPLACE

Variables	B	Se	F
POE14EN	0.178	0.049	13.089
DENSMILE	-2.054	0.632	10.552
PUNEMPN	-0.146	0.033	19.158
PPOPWHI	0.188	0.086	4.778
(constant) 11.690			

$R^2 = 0.3183$ df = 225 $p < .01$

TABLE A.14

LEA - VARIABLE DESCRIPTIONS AND VARIABLE CODES FOR ANALYSIS OF VARIANCE

Variable Name	Code	Variable Code
Manufacturing as the county's major industry	1 = yes 0 = no	IC1014
Metro/rural location of LEA	0 = metro 1 = rural	METRUR
Median education level, females	1 = 7.7- 8.8 years 2 = 8.9-10.1 years 3 = 10.2-11.4 years 4 = 11.5-12.7 years 5 = 12.8-14.0 years	MEDEDF
Industrial mix by size	1 = 60- 76 new industries 2 = 77- 93 3 = 94-110 4 = 111-127 5 = 128- +	INDCHG
Percent of unemployment	1 = 0- 2.50 2 = 2.51- 5.00 3 = 5.01- 7.50 4 = 7.51-10.00 5 =10.01- +	PUNEMP
Percent of secondary enrollment in vocational education programs	1 = 0- 25% 2 = 26- 50% 3 = 51- 75% 4 = 76-100%	PPVEEN
Percent of the population of other than white race	1 = 0-13.0% 2 = 13.1- +	PPOPOTH

TABLE A.15

LEA - MEANS AND STANDARD DEVIATION OF PERCENT OF PLACEMENT BY MAJOR INDUSTRIAL TYPE - MANUFACTURING AND METRO-RURAL LOCATION

	Manufacturing (1) as Major Industry		Other Major (0) Industries		Grand Mean
	M	Sd	M	Sd	M
Metro (0)	26.85	19.17	33.00	14.98	28.05
Rural (1)	31.71	18.82	25.25	15.78	29.89
Totals	28.85	19.17	29.05	15.84	

TABLE A.16

LEA - ANALYSIS OF VARIANCE OF PERCENT OF RELATED VOCATIONAL EDUCATION PLACEMENT BY MAJOR INDUSTRY TYPE - MANUFACTURING AND METRO-RURAL LOCATION

Source	df	MS	F
Manufacturing (A)	1	0.605	0.002
Metro-Rural (B)	1	485.370	1.468
Interaction (A X B)*	1	4572.420	13.832
Error	575		

* $p < .05$

TABLE A.17

SIGNIFICANT CORRELATIONS ($p < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (EMPLOYERS FROM 59 LEAs)

Description (and response category)	r	$\bar{x}$	sd
1. Percentage of employees hired within the past two years who are former vocational education students	-.281	57.21	21.506
2. Ranking of the goal for vocational education: To provide exploration of various occupational areas (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.244	3.455	.604
3. Responsibility ranking of the public employment service in helping job obtainment (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	.382	3.339	.748
4. Ranking of the importance of high school grades in the decision to hire (5=very much importance, 4=much importance, 3=some importance, 2=little importance, 1=very little importance)	-.245	3.128	.514
5. Amount of difficulty that a lack of specific job skills poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2 little difficulty, 1=very little difficulty)	-.214	3.446	.688

TABLE A.17
(continued)

SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (EMPLOYER FROM 59 LEAs)

Description (and response category)	r	$\bar{x}$	sd
6. Amount of difficulty that age discrimination poses in job obtainment (5= very much difficulty, 4=much difficulty, 3=some difficulty, 2 little difficulty, 1=very little difficulty).	-.236	2.413	.825
7. Amount of difficulty that lack of a high school diploma poses in job obtainment (5= very much difficulty, 4=much difficulty, 3=some difficulty, 2 little difficulty, 1=very little difficulty).	-.248	3.067	.734
8. Frequency that the high school should contact employers requesting information about competencies needed by workers (5=once a month, 4=four times a year, 3=twice a year, 2=once a year, 1=never).	.253	8.740	.125
9. Amount of importance that scores on company administered tests have in the decision to employ a person for an entry level job (5=very much importance, 4=much importance, 3=some importance, 2=little importance, 1=very little importance).	-.248	3.062	.811

TABLE A.18
SIGNIGFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND TRAINING RELATED PLACEMENT RATE BY RESPONDENT GROUP (FORMER STUDENTS FROM 57 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Hours per week spent on first work-study job while in high school	.257	4.300	7.373
2. Length (in months) on first cooperative education job while in high school	-.258	13.643	20.658
3. Wages per hour on first cooperative education job while in high school	-.235	52.549	71.814
4. Hours per week spent on first noncooperative education or nonwork-study job in high school	.349	11.683	7.516
5. Length (in months) spent on first noncooperative education or nonwork-study job in high school	.238	42.891	54.751
6. Wage per hour on first noncooperative education or nonwork-study job in high school	.363	124.604	83.853
7. Percentage of students per LEA belonging to FHA/HERO	.265	12.377	20.109
8. Percentage of students per LEA belonging to VICA	.238	21.232	26.610
9. Percentage of student per LEA who received instruction in writing resumes	-.286	50.356	29.730
10. Competition between vocational education graduates and nonvocational education graduates in job obtainment (the vocational education students' chances of getting a job are: 5=much better, 4=better, 3=the same, 2=worse, 1=much worse)	.299	4.529	.428

TABLE A.18
(continued)
SIGNIGFICANT CORRELATIONS ($P < .05$) BETWEEN
SELECTED VARIABLES AND TRAINING RELATED PLACEMENT
RATE BY RESPONDENT GROUP (FORMER STUDENTS FROM 57 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
11. Amount of difficulty that age discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficutly)	.224	3.384	.829
12. Ranking of the goal of vocational education: Job placement in non-training related job (5=most imoortant goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, and 1=least important goal	.271	1.693	.826
13. Amount of responsibility the cooperative education coordinator should have in helping students obtain jobs (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, and 1=very little responsibility)	-.296	3.670	.815
14. Helpfulness ratings of a good work attitude in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.226	4.681	.326
15. Helpfulness rating of previous work experience in job obtainment (response categories are identical to those above)	.282	4.165	.609

TABLE A.19
SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (VOCATIONAL EDUCATION TEACHERS FROM 62 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Total number of hours spent on job placement activities	.255	3.820	2.477
2. Total number of hours spent on conducting follow-up of former students	.266	.363	.301
3. Frequency of participation in job referrals (5=very frequently, 4=frequently, 3=twice a year, 2=once a year, 1=never)	-.207	3.950	.404
4. Frequency that teachers contact parents of vocational education students about student progress (5= once a month, 4= four times a year, 3= twice a year, 2= once a year, 1= never)	-.284	4.073	1.089
5a Helpfulness of vocational education teachers as sources of informtion about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	+.471	4.031	.457
5b Helpfulness of cooperative education teachers as sources of informtion about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.302	3.708	.695
6a Amount of difficulty that sex discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.241	2.304	.523

TABLE A.19
(continued)
SIGNIFICANT CORRELATIONS ($p < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (VOCATIONAL EDUCATION TEACHERS FROM 62 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
6b Amount of difficulty that race discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.240	2.321	.679
6c Amount of difficulty that union restrictions on hiring pose in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.304	2.479	.659
6d Amount of difficulty that lack of transportation poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.254	2.670	.555
6e Amount of difficulty that lack of a high school diploma poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.222	3.139	.614
7a Amount of difficulty that competition with experienced workers poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.320	3.681	.496
7b Amount of difficulty that lack of available jobs poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.490	3.663	.649

TABLE A.19
(continued)
SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (VOCATIONAL EDUCATION TEACHERS FROM 62 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
7c Amount of difficulty that age discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.285	2.840	.403
8. Percentage of teachers holding a teaching certificate in guidance and counseling	-.231	1.295	3.076
9. Number of years in present position	-.247	7.823	2.737
10. Amount of responsibility vocational education teachers have in helping students obtain jobs (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	.390	3.550	.404
11a Helpfulness of the previous work experience in obtaining jobs (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.210	3.991	.328
11b Helpfulness of the involvement of employers with the vocational education school in obtaining jobs for students (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.430	4.077	.373
12 Frequency that school contacts parents concerning student progress (5=once a month, 4=four times a year, 3=twice a year, 2=once a year, 1=never)	-.284	4.073	1.089

TABLE A.20
SIGNIFICANT CORRELATIONS ($p < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PRINCIPALS FROM 53 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Ranking of the goal for vocational education: To provide competencies needed to obtain a job (5=most important goal, 4=next most important goal, 3=next most important goal, and 1=least important goal)	-.369	4.454	.603
2. Amount of difficulty that age discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	+.240	2.562	.825
3. Amount of difficulty that lack of transportation poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.248	2.288	.893
5. Number of years spent in teaching vocational education	-.270	.115	.306
6. Percentage of schools employing a designated job placement officer	-.369	44.79	43.017
7. Percentage of schools providing instructional materials on job-seeking skills	-.300	77.69	32.214
8. Percentage of schools providing job listings per LEA	-.445	64.05	39.481

TABLE A.20

SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PRINCIPALS FROM 53 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
9. Percentage of schools lacking designated job placement officers, office space, job lisings, and instructional materials on job-seeking skills in their placement activities per LEA	.325	10.15	27.073

TABLE A.21

SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (PARENTS FROM 61 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Ranking of the goal: To provide students with competencies needed to obtain a job (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.242	4.137	.362
2a Responsibility ratings of the cooperative education coordinator's role in helping students obtain jobs (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	-.306	3.538	.515
2b Responsibility ratings of the local advisory committee's role in helping students obtain jobs (5=very much responsibility, 4=much resonsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	-.269	3.392	.442
3. Helpfulness of good work attitudes in job obtainment (5=very much help, 4=much help, 3=some help, 2 little help, 1=very little help)	.230	4.687	.216
4. Amount of difficulty that no jobs available poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.272	4.273	.438

TABLE A.22
SIGNIFICANT CORRELATIONS ($P \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (ADVISORY COUNCIL MEMBERS FROM 48 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Helpfulness rating of the advisory council in assisting the schoool in identifying job skills and tasks (5=very much help, [illegible] help, 3=some help, 2=little [illegible] very little help)	.352	3.409	.943
2. Helpfulness rating of the advisory council in assisting the schoool in placing students in jobs (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.297	2.919	.987
3. Helpfulness rating of the advisory council in assisting the schoool in providing occupational information for guidance and job placement (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.268	3.394	.845
4. Ranking of the goal for vocational education: Create awareness of various jobs (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	-.264	3.753	.722
5. Responsibility ratings of the vocational education teacher as a source of information about job openings (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	.257	3.570	.635

TABLE A.22
(continued)
SIGNIFICANT CORRELATIONS ($\underline{P} \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (ADVISORY COUNCIL MEMBERS FROM 48 LEAs)

Description (and response categories)	$\underline{r}$	$\overline{x}$	sd
6. Helpfulness rating of occupational skills in the obtainment of jobs (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.244	4.584	.400

TABLE A.23
SIGNIFICANT CORRELATIONS ($\underline{p} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (COUNSELORS FROM 58 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
1. Responsibility of the vocational education teacher to help vocational education students obtain jobs upon leaving high school (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	.342	3.760	.792
2a Amount of difficulty that a lack of available jobs poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.334	3.932	.889
2b Amount of difficulty that age discrimination poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.222	3.217	.591
2c Amount of difficulty that sex discrimination poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.278	2.870	.734
2d Amount of difficulty that race discrimination poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.361	2.687	.905

TABLE A.23
(continued)

SIGNIFICANT CORRELATIONS ($\underline{P} \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (COUNSELORS FROM 58 LEAs)

Description (and response categories)		r	$\bar{x}$	sd
2e	Amount of difficulty that union restrictions on hiring poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.321	3.145	.997
2f	Amount of difficulty that a lack of transportation poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.365	2.802	.919
3a	Helpfulness rating of vocational education teachers as sources of information about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.303	4.006	.620
3b	Helpfulness rating of friends as sources of information about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.302	2.999	.655
3c	Helpfulness rating of former vocational education students as sources of information about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.246	3.231	.584

TABLE A.23
(continued)
SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN
SELECTED VARIABLES AND JOB PLACEMENT RATE
IN RELATED FIELD BY RESPONDENT GROUP (COUNSELORS FROM 58 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
4. Rating of school's performance in providing training in job-seeking skills (5=excellent, 4=good, 3=fair, 2=poor, 1=failing).	.304	3.769	.756
5. Number of years experience in present position	-.302	7.900	4.793
6. Number of years of experience in work related to present position	-.236	6.351	4.702
7. Amount of time spent in job placement activities (4=full-time, 3=half-time, 2=quarter time, 1=less than quarter time)	.248	1.64	.494

TABLE A.24
SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP
(PLACEMENT SPECIALISTS FROM 19 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
1. Frequency of participation in postsecondary education placement (5=very frequently, 4=frequently, 3=sometimes, 2=rarely, 1=never)	.422	3.371	.843
2. Percentage of schools using youth organization-sponsored activities as a means to provide instruction in job seeking skills	.611	13.74	31.434
3. Percentage of schools using youth self-instructional materials as a means to provide instruction in job seeking skills	.429	32.030	39.387
4. Percentage of schools using special features as a means to provide instruction in job seeking skills	.513	20.319	37.102
5a Ranking of the goal: Placement in non-training related job (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.538	1.815	1.105
5b Ranking of the goal: Create an awareness of various jobs for which one might prepare (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	-.446	3.657	1.039
6. Helpfulness ratings of friends as a source of information about job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.560	3.567	1.055

TABLE A.24
(continued)
SIGNIFICANT CORRELATIONS ($\underline{p}$ <.05) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP
(PLACEMENT SPECIALISTS FROM 58 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
7. Responsibility rating of the vocational education teacher in helping students obtain jobs (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility).	.441	3.796	1.071
8. Helpfulness ratings of previous work experience as a factor in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help).	.409	4.163	.743
9a Amount of difficulty that a lack of available jobs poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty).	-.389	3.821	1.109
9b Amount of difficulty that age discrimination poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty).	.525	3.105	.960
9c Amount of difficulty that race discrimination poses to vocational education graduates attempting to obtain jobs (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty).	.406	2.401	.861

TABLE A.24
(continued)
SIGNIFICANT CORRELATIONS ($\underline{P} < .05$) BETWEEN
SELECTED VARIABLES AND JOB PLACEMENT RATE
IN RELATED FIELD BY RESPONDENT GROUP
(PLACEMENT SPECIALISTS FROM 58 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
9d Amount of difficulty that the minimum wage poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	.521	3.107	1.158
10. Percentage of placement specialists holding a teaching certificate in teaching trade & industry	.608	7.895	25.073
11. Years of experience in teaching vocational education	.524	4.506	4.556

TABLE A.25
SIGNIFICANT CORRELATIONS ($p < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP
(CURRENT STUDENTS FROM 59 LEAs)

	Description (and response categories)	r	$\bar{x}$	sd
1a	Helpfulness ratings of knowing how to locate available jobs in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.278	4.229	.484
1b	Helpfulness ratings of knowing how to fill out a job application in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.218	4.190	.541
1c	Helpfulness ratings of preparing for a job interview in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.274	4.349	.476
2a	Amount of difficulty that race discrimination poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.264	2.882	.672
2b	Amount of difficulty that lack of transportation poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.392	3.229	.658
2c	Amount of difficulty that lack of a high school diploma poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	-.324	3.665	.744

TABLE A.25
(continued)
SIGNIFICANT CORRELATIONS ($\underline{P} \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP
(CURRENT STUDENTS FROM 59 LEAs)

Description (and response categories)	$\underline{r}$	$\bar{x}$	sd
3a Helpfulness of school placement services as a source of information regarding job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.284	3.869	.987
3b Helpfulness ratings of the public employment service as a source of information regarding job openings (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	-.350	3.712	.856
4a Amount of responsibility the guidance counselors should have in job obtainment (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	-.444	3.450	.471
4b Amount of responsibility the cooperative education coordinator should have in job obtainment (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	-.472	3.558	.468
4c Amount of responsibility the school placement service should have in job obtainment (5=very much responsibility, 4=much responsibility, 3=some responsibility, 2=little responsibility, 1=very little responsibility)	-.314	3.907	.523

TABLE A.25
(continued)

SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP
(CURRENT STUDENTS FROM 59 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
5a Ratings of the school's performance in helping student decide work interests and job goals (5=excellent, 4=good, 3=fair, 2=poor, 1=failing)	.309	3.606	.462
5b Ratings of the school's performance in helping students learn about job openings (5=excellent, 4=good, 3=fair, 2=poor, 1=failing)	.223	3.441	.667
5c Ratings of the school's performance in helping students get a specific job (5=excellent, 4=good, 3=fair, 2=poor, 1=failing)	.228	3.340	.700

TABLE A.26
SIGNIFICANT CORRELATIONS ($\underline{P} \leq .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (DIRECTORS OF VOCATIONAL EDUCATION FROM 47 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
1. Time spent participating in teaching cooperative education (1=full-time, 2=half-time, 3=quarter-time, 4=less than quarter-time)	.244	.213	.778
2. Time spent participating in guidance and counseling (1=full-time, 2=half-time, 3=quarter-time, 4=less than quarter-time)	-.283	.177	.636
3. Time involved in work experiences related to your present position (number of years)	.277	10.350	10.380
4. Ranking of the goal of vocational education: Placement in training related job (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.362	3.567	1.077
5. Ranking of the goal of vocational education: Placement in a job not necessarily related to training (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.260	1.801	.962
6. Ranking of the goal of vocational education : Creation of an awareness of the various jobs for which one might prepare (5=most important goal, 4=next most important goal, 3=next most important goal, 2=next most important goal, 1=least important goal)	.269	3.209	1.245

TABLE A.26
(continued)
SIGNIFICANT CORRELATIONS ($P < .05$) BETWEEN SELECTED VARIABLES AND JOB PLACEMENT RATE IN RELATED FIELD BY RESPONDENT GROUP (DIRECTORS OF VOCATIONAL EDUCATION FROM 47 LEAs)

Description (and response categories)	r	$\bar{x}$	sd
7. Helpfulness of human relations skills in job obtainment (5=very much help, 4=much help, 3=some help, 2=little help, 1=very little help)	.266	4.340	.731
8. Amount of difficulty that a lack of specific job skills poses in job obtainment (5=very much difficulty, 4=much difficulty, 3=some difficulty, 2=little difficulty, 1=very little difficulty)	.306	3.411	.866
9. Frequency that follow-up of vocational education completers is conducted (5=every year, 4=every 2 years, 3=every 3 years, 2=every 5 years, 1=never)	-.402	4.766	.666
10 Frequency that follow-up of vocational education leavers is conducted (5=every year, 4=every 2 years, 3=every 3 years, 2=every 5 years, 1=never)	-.282	4.968	.862
11. Frequency that vocational education programs are evaluated by the local director of vocational education (5=every year, 4=every 2 years, 3=every 3 years, 2=every 5 years, 1=never)	.249	4.816	.568

TABLE A.27

Regression Analysis Between the 14 Independent Variables and the Dependent Variable Job Placement in Related Field.[1] (n = 61 LEAs, Respondent Group = Parents, n = 1410)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Respon. coop ed coor. have help student find jobs	.32	0.4074	.1623	6.299*	ed.	Yes
Diff.. no jobs	.31	0.3715	0.1290	8.293**	ec.	No
Parental expectation for student after high school	-.04	0.2710	0.1339	4.097*	sd.	No
Goal: opport. to explore various occupations	.28	0.2545	0.1310	3.776	ed.	Yes
Helpfulness of invol. of employers in find. jobs.	.13	0.2206	0.1285	2.946	sd	No
Helpfulness of basic skills	.20	0.1780	0.1567	1.290	ed.	Yes
Helpfulness positive work attitude	-.18	0.0214	0.1452	0.022	ed.	Yes
Helpfulness of human relations	-.10	-0.1227	0.1543	0.632	ed.	Yes
Lack of transportation	.03	-0.1416	0.1288	1.209	ec.	No
Freq. parents receive info. about Vo Ed program	-.18	-0.1742	0.1183	2.167	ed.	Yes
Goal: place. in related field	-.06	-0.1827	0.1295	1.989	ed.	Yes

TABLE A.27
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Difficulty min. wage	-.03	-.0.2092	0.1279	2.674	ec.	No
Goal: provide student with competencies	-.17	-0.2215	0.1303	2.891	ed.	Yes

Multiple r = 0.6771
r Square = .4585
Adjusted r Square = .3087
Std. Error = 18.1426

F Ratio = 3.061
df = 12, 48
Constant = -34.87

1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05 **Significant at .01

TABLE A.28

Regression Analysis Between the 16 Independent Variables and the Dependent Variable Job Placement in Related Field.[1] (n = 59 LEAs; Respondents = Former Students, n = 497)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Previous work exp.	-.29	-0.7200	.1537	22 555**	sd.	Yes
Job readiness--resume writing	.29	-0.4746	0.1103	18.502**	ed.	Yes
Goal: place. not related to training	-.24	0.4669	0.1306	12.774**	ed.	Yes
Lack of transportation	-.02	0.4079	0.1312	9.660**	ec.	No
Basic ed. skills	.13	0.4006	0.1180	11.518**	ed.	Yes
Hold job while in school	.09	0.3840	0.1165	10.858**	sd.	Yes
Age discrim.	-.25	-0.3212	0.1230	6.825*	sd.	No
Sch. placement serv. as source of info.	.06	0.3084	0.1216	6.427*	ed.	Yes
Student membership in VICA	.24	0.2881	0.0959	9.031**	ed.	Yes
Rating of school performance help learn job opening	.06	0.2052	0.1046	3.850	ed.	Yes
Goal...Place related to field	-.09	0.1998	0.1126	3.850	ed.	Yes
No jobs available	.21	0.1766	0.1034	2.916	ec.	No
Rate quality of high school vo ed program in preparation for first job	-.05	0.1522	0.1020	2.225	ed.	Yes

TABLE A.28
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Help are occup. skills	-.21	0.1336	.1348	0.982	ed.	Yes
Positive work attitudes	-.22	-0.1201	0.1311	0.839	sd.	Yes

Multiple r = .8549
r Square = .7308
Adjusted r Square = .6324
Std. Error = 13.1047

F Ratio = 7.42**
df = 15, 41
Constant = 46.98

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1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05

**Significant at .01

TABLE A.29

Regression Analysis Between the 19 Independent Variables in the Full Model and the Dependent Variable Job Placement in Related Field.[1]
(n = 59 LEAs; Respondents = Current Students, n = 659)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Diff. lack of transportation	.44	0.6845	.1298	27.834**	ec.	No
School Placement service as source of info.	.36	0.5199	.1425	13.303**	ed.	Yes
Help Voc Ed teacher about jobs	-0.16	-0.4559	.1467	9.666**	ed.	Yes
Diff. age discrim. pose in finding jobs	.16	-0.2173	.1158	3.510	sd.	No
Rating of schools perform to learn about jobs	-.21	-0.2093	.1371	2.321	ed.	Yes
Goal...not related to training	0.16	.1940	.1362	2.030	ed.	Yes
Student membership in VICA	.43	0.1730	.1070	2.613	ed.	Yes
Help basic skills	.02	-0.1623	.1260	1.653	ed.	Yes
Help is public emp. serv. as source of job info.	.45	0.1412	.1284	1.206	ed.	Yes
Goal: placing in related training	.08	-.1400	.1279	1.199	ed.	Yes
Receive training in resume writing	-0.13	-0.1250	.1272	0.868	ed.	Yes
Difficult minimum wage	-0.15	.08713	.1020	0.727	ec.	No
Help previous work experience	.11	0.0788	.1079	0.536	ed.	No

TABLE A.29
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Plans after school--full-time job	.19	-0.0678	.0124	0.299	sd.	No
Goal: explore job opportunities	-0.15	-0.0539	.1347	0.160	ed.	Yes
Job while in high school	-0.07	0.0444	.0102	0.185	sd.	Yes
Help occ. skills in obtaining jobs	0.0892	-0.0219	.1095	0.040	ed.	Yes

Multiple r = .85608
r Square = 0.7329
Adjusted r Square = 0.6221
Std. Error = 13.4499

F Ratio = 6.6170**
df = 17, 41
Constant = 12.15134

---

1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05 **Significant at .01

TABLE A.30

Regression Analysis Between the 22 Independent Variables in the Full Model and the Depedent Variable Job Placement in Related Field.[1]
(n = 62 LEAs; Respondents = Teachers, Counselors, Placement Specialist, n = 1452)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
No. jobs available	.52	.3765	.1624	5.373**	ec.	No
Much resp. Vo Ed Teachers have in help Grads. obtain jobs	-.50	-.2791	.1549	3.247**	ed.	Yes
Difficulty does competition with exp. workers	.28	-.2617	.1536	2.902**	sd.	No
Years exp. teach. Vo Ed	-.03	0.2497	.1942	1.655	ed.	Yes
Diff. race discrim.	.28	.2440	.2021	1.458	sd.	No
Help sch. place. source info. job	.06	.2147	.1628	1.745*	ed.	Yes
Help Coop Ed. Tea. as source of info. about job openings	.31	.1980	.1508	1.724*	ed.	Yes
Resp. sch. place. service	.13	-0.1962	.1583	1.535	ed.	Yes
Vo Ed Teachers as a source of information	-.56	-.1838	.1819	1.021	ed.	Yes
Length time pres. position	-.27	-0.1790	.2254	0.628	ed.	Yes
Help involving employers	-.44	-.1379	.1665	0.686	ed.	Yes
Total of hrs. staff per week for school	-.12	0.1220	.1724	0.501	ed.	Yes

TABLE A.30
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2].	School Control[3].
Total hrs. wk. staff in follow-up	-.19	-0.1031	.1470	0.490	ed.	Yes
Difficulty union restrict.	.37	.0891	.1723	0.267	sd.	No
Lack of Transp.	.41	.0604	.1639	0.136	ec.	No
Goal: awareness of job	.12	-.0597	.1588	0.141	ed.	Yes
Goal: job place. related field	-.09	.0568	.1653	.119	ed.	Yes
Goal: not rel. to training	-.07	.0525	.1219	.185	ed.	Yes
Time guidance and counseling	.05	-.0228	.1519	.023	ed.	Yes
Difficulty sex discrimination	.31	.0224	.1534	.021	sd.	No
Time spent in job placement	-.03	.0222	.1509	.021	ed.	Yes
Previous work exp.	-.10	-.0143	.1405	.010	sd.	Yes

Multiple r = 0.7969
r Square = 0.6351
Adjusted r Square = 0.4293
Std. Error = 16.3724

F-Ratio = 3.085**
df = 22, 39
Constant = 27.50

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1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05

**Significant at .01

TABLE A.31

Regression Analysis Between the 14 Independent Variables in the Full Model and the Dependent Variable Job Placement in Related Field.[1] (n = 48 LEAs; Respondents = Advisory Council Members, n = 215)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Help are occup. skills in obtaining jobs	-.26	-0.4201	.2150	3.814	ed.	Yes
Goal: create awareness of jobs	.26	0.3901	.1684	5.373*	ed.	Yes
Help adv. cncl. in identify job skills	-.28	-0.3816	.2793	1.850	ed.	Yes
Goal: provide student with competencies	.06	0.3502	.1681	4.338*	ed.	Yes
Help adv. cncl. in help to place students	-.24	-0.3046	.3089	0.944	ed.	Yes
Help is adv. cncl. in assist. in eval.	-.00	0.2917	.2312	1.573	ed.	Yes
Help involvement with employers with school	.01	0.2764	.2609	1.153	ed.	Yes
Help adv. cncl. in assist. to provide occup. info.	-0.12	0.2181	.3022	0.521	ed.	Yes
Help previous work experience	-0.13	-0.2165	.2408	0.834	ed.	Yes/No
Lack of Transp.	-0.04	-0.1166	.1953	0.377	ed.	Yes
Often does adv. council meet	-0.05	0.0764	.1878	0.188	ed.	Yes

TABLE A.31
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Members years on council	-0.18	-0.0757	.0164	0.238	ed.	Yes
Goal: placement related field	-0.18	.0585	.2048	0.085	ed.	Yes
Difficulty minum. wage	-0.14	-0.0179	.0008	0.011	ed.	Yes

Multiple r = 0.6454
r Square = 0.4166
Adjusted r Square = 0.1691
Std. Error = 16.3724

F-Ratio = 1.683
df = 14, 33
Constant = 52.00

1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

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*Significant at .05

387

TABLE A.32

Regression Analysis Between the 12 Independent Variables in the Full Model and the Depedent Variable Job Placement in Related Field.[1] (n = 59 LEAs, Respondent Group = Directors and Principals, n = 208)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Yrs. exp. teach. Vo Ed	.17	0.2425	.1405	2.964	ed.	Yes
Age discrm.	-.21	-0.2392	.1518	2.477	sd.	No
Goal: provide students with competencies	.30	0.2359	.1454	2.633	ed.	Yes
Human relat. skill	.10	0.2137	.1789	1.417	ed.	Yes
Lack of transp.	.23	0.1988	.1490	1.778	ec.	No
Create awareness of jobs	-.20	-0.1719	.1725	0.994	ed.	Yes
Help...involve. with employers	-.08	-0.0876	.1688	0.266	ed.	Yes
Diff. min. wage	-.11	-0.0852	.1520	0.313	ec.	No
Goal: place. related to trng.	.00	-0.0840	.1791	0.220	ed.	Yes
Occup. skills help get jobs	.08	-0.0216	.1529	0.020	ed.	Yes

Multiple r = 0.5320
r Square = 0.2831
Adjusted r Square = 0.0919
Std. Error = 19.8824

F-Ratio = 1.481
df = 12, 45
Constant = 57.80

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1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable

*Significant at .05 **Significant at .01

TABLE A.32
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Yrs. in present position	-.16	-0.0173	.0155	0.012	ed.	Yes
Goal: place. not related to trng.	-.06	-0.0165	.1542	0.011	ed.	Yes

Multiple r = 0.5320
r Square = 0.2831
Adjusted r Square = 0.0919
Std. Error = 19.8824

F-Ratio = 1.481
df = 12, 45
Constant = 57.80

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1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

TABLE A.33

Regression Analysis Between the 15 Independent Variables in the Full Model and the Dependent Variable Job Placement in Related Field.[1]
(n = 59 LEAs, Respondent Group = Employers, n = 588)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Diff. sex. discrm.	.09	- .9146	.3778	5.868**	sd.	No
Diff. age discrm.	.21	.6408	.2994	4.747*	sd.	No
Diff. min. wage	-.03	- .4031	.2079	3.707	ec.	No
Lack of transp.	.38	.3801	.1981	3.670	ec.	No
Goal: placement related to trng.	-.26	- .3222	.1262	6.500**	ed.	Yes
Goal of compet.	.29	.2226	.1528	2.070	ed.	Yes
% new hires Vo Ed	-.28	- .2132	.1792	1.429	sd.	No
Rate Vo Ed versus non-Vo Ed on work attitude	.24	.2071	.1434	2.140	sd.	No
Diff. competition with exp. workers	.11	.1809	.1517	1.407		
Difficulty race discrimination	.02	.1765	.3178	.320	sd.	Yes
High school grades	.23	.1470	.1538	.950	ed.	Yes
Diff. no jobs	.18	.0983	.1598	.378	ec.	No
Imp. prev. work exp.	.15	.0701	.1354	.267	ed.	Yes
Diff. lack of spec. job skills	.20	.0580	.1609	.130	ed.	Yes

TABLE A.33
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2.]	School Control[3.]
Scores on Co. Tests	.22	-0.0017	.0163	.00	ed.	Yes

Multiple r = .7214
r Square = .5204
Adjusted r Square = .3530
Std. Error = 16.9536

F-Ratio = 3.110
df = 15, 43
Constant = 52.37

1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic.
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05

**Significant at .025

TABLE A.34

Regression Analysis Between the 14 Independent Variables in the Reduced Model and the Depedent Variable Job Placement in Related Field.[1]
(n = 50 LEAs)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2]	School Control[3]
Help is school placement serv. in defining job openings	.32	.49	.1068	21.07**	ed.	Yes
Help is Vo Ed teacher in defining job opening	-.40	.48	.1214	15.88**	ed.	Yes
Unemployment Rate	-.58	-.34	.1151	8.91**	ec.	No
Held job while in school	.03	.20	.1105	3.27**	ed.	Yes
Difficulty lack of transportation	.40	.19	.0980	3.67**	sd.	No
Goal: placement related	-.13	-.18	.1086	2.62**	ed.	Yes
Help in getting job is previous work experience	.01	.16	.1042	2.[illegible]7*	ed.	Yes
No jobs available	.48	.16	.1284	1.48	ec.	No

Multiple R = .85
R Square = .73
Adjusted R Square = .63
Std. Error = 12.61

Overall F-ratio = 7.30**
df = 13, 36
Constant = -41.40

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1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic
3. Opinion on whether the school can control or influence the particular variable.

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*Significant at .05

**Significant at .01

TABLE A.34
(continued)

Variables	r	Beta	Std. Error	F-Ratio	Variable Type[2.]	School Control[3.]
Industry change	.09	.13	.1067	1.39	ec.	No
Years exp. teach. Vo Ed	.00	.11		1.26	ed.	Yes
Percent of students in coop.	-.10	.11	.1094	1.03	ec.	No
Industry mix	.19	.05	-.0011	.24	ec.	No
Parental expectations for students	.07	.01	.0775	.02	sd.	No

Multiple R = .85	Overall F-ratio = 7.30**
R Square = .73	df = 13, 35
Adjusted R Square = .63	Constant = -41.40
Std. Error = 12.61	

1. Derived percent of placement in related field by LEA.
2. ed. = education, sd. = sociodemographic, ec. = economic
3. Opinion on whether the school can control or influence the particular variable.

*Significant at .05 **Significant at .01

TABLE A.35

SUMMARY OF MAJOR VARIABLES FROM THE REGRESSION ANALYSIS OF SELECTED INDIVIDUAL RESPONDENT GROUPS

Former Student	Variable Description	Variable Type	School Control
V067	Previous work experience	sd.	yes
V307	Job readiness - resume writing	ed.	yes
V063	Basic education skills	ed.	yes
V259	Student membership in VICA	ed.	yes
V270	Hold job while in school	sd.	yes
V052	Goal: place in job not related to training	ed.	yes
V095	Difficulty lack of transportation poses	ec.	no
Current Student			
V095	Difficulty lack of transportation poses	ec.	no
V098	How much help vocational education teacher is in locating jobs	ed.	yes
V100	School placement office as source of information	ed.	yes
V089	No jobs available	ec.	no
V055	How much responsibility vocational education teachers have for helping graduates obtain jobs	ed.	yes
V087	Difficulty posed by competition with experienced workers	sd.	no

TABLE A.36

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES
BY RESPONDENT GROUP: TEACHERS, COUNSELORS, JOB PLACEMENT SPECIALISTS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Help coop teacher source of information job opening	.46	2.08	.67	3	.55	0.0000
Difficulty sex discrimination	.31	29.55	27.51	4	.53	0.0000
Difficulty lack of transportation	.50	12.13	9.68	2	.60	0.0000
Responsibility vocational education teacher help get jobs	-.80	7.93	12.49	1	.77	0.0000
Involvement of employer	-.30	28.75	30.94	6	.50	0.0000
Difficulty in obtaining jobs due to competing with experienced workers	-.35	14.71	16.34	5	.51	0.0000
Constant		-135.38	-135.35			

Eigenvalue = 1.02
Canonical Correlation = .71
Wilkes Lambda = .49
Chi Square = 39.989 df = 6, significance = 0.0000

Percentage of cases correctly classified = 85.48
tau = .75

TABLE A.37

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: DIRECTORS AND PRINCIPALS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Difficulty age discrmination	-.92	5.48	6.41	2	.83	.005
Difficulty minimum wage	-.78	7.69	8.48	3	.79	.0051
Difficulty lack of transportation	1.53	6.17	4.62	12	.89	.0102
Constant		-34.19	-34.20			

Eigenvalue = .26
Canonical Correlation = .46
Wilkes Lambda = .79
Chi Square = 12.785 df = 3, significance = .0051

Percentage of cases correctly classified = 63.79
tau = .47

TABLE A.38

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: CURRENT STUDENTS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Goal of placement not related to training	.51	16.14	14.60	3	.68	.0001
Help previous work exper.	.27	19.22	17.84	10	.45	.0000
Help on basic education skills	.40	2.98	5.32	9	.46	.0000
Job Readiness	-.68	-0.017	-.040	7	.49	.0000
Held job while in school	.23	20.25	18.11	8	.48	.0000
Student membership in VICA	-.26	0.12	0.15	1	.84	.0015
Difficulty age discrimination	-.48	12.07	14.15	6	.52	.0000
Difficulty lack of transportation	.80	-.140	-4.08	4	.64	.0001
Help voc ed teacher as source of info about job openings	-.66	3.16	5.54	5	.56	.0000
Help school plan service as a source of info about job openings	1.09	6.41	3.58	2	.75	.0003
Constant		-88.73	-81.26			

Eigenvalue = 1.211
Canonical Correlation = .74
Wilkes Lambda = .45
Chi Square = 41.262 df = 10, significance = .0000

Percentage of cases correctly classified = 91.53
tau = .71

TABLE A.39

DISCRIMINANT ANALYSIS OF SELECTED
VARIABLES BY RESPONDENT GROUP: FORMER STUDENTS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Placement not related to training	1.15	.60	4.51	4	.51	.0000
Help in previous work experience	1.42	-10.04	-3.99	2	.77	.0008
Help basic education skills	-.89	8.24	2.55	1	.91	.0236
Job readiness training: resumes	.65	.05	.12	3	.66	.0001
Student membership in VICA	-.65	.04	-.02	5	.54	.0000
Job while in school	-.65	.12	.06	9	.42	.0000
Lack of transporation	-.82	8.31	5.85	6	.49	.0000
Help school placement as source of info about jobs	-.71	.65	-.52	10	.38	.0000
Rate school performance in help to learn about jobs	-.51	17.10	14.84	8	.44	.0000
Help public employment service		Excluded	Excluded	9	.38	.0000
Constant		-48.80	-45.35			

Eigenvalue = 1.75
Canonical Correlation = .80
Wilkes Lambda = .36
Chi Square = 50.638 df = 10, significance = .0000

Percentage of cases correctly classified = 92.98
tau = .87

TABLE A.40

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: PARENTS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Goal of competencies needed to obtain jobs	-.63	14.18	16.20	3	.85	.0223
Goal to explore occupational areas	.39	17.80	16.70	1	.93	.0427
Difficulty no jobs available	.60	5.89	4.38	2	.89	.0366
Responsibility of cooperative coordinator in helping obtain jobs	.45	8.76	7.62	4	.79	.0095
Frequency parents received information about vocational education programs	-.37	.33	.53	6	.74	.0111
Level of education	-.36	10.62	11.32	5	.77	.0109
Constant		-78.22	-76.50			

Eigenvalue = .34
Canonical Correlation = .51
Wilkes Lambda = .74
Chi Square = 16.570 df = 6, significance = .0110

Percentage of cases correctly classified = 75.41
tau = .60

TABLE A.41

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: ADVISORY COUNCIL MEMBERS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Create awareness of various jobs	-.63	4.59	3.20	4	.69	.0025
Help occupational skills in identifying job skills	.73	4.92	7.75	3	.73	.0029
Help advisory in assisting identifying job skills	1.24	0.85	2.84	1	.90	.0271
Help advisory in providing occupational information for guidance and job placement	-1.16	1.86	-0.12	2	.79	.0050
Frequency of advisory council meeting	.44	-.038	0.15	5	.65	.0022
Constant		-13.23	-14.78			

Eigenvalue = .54
Canonical Correlation = .59
Wilkes Lambda = .65
Chi Square = 18.702 df = 5, significance = 0.0022

Percentage of cases correctly classified = 79.17
tau = .66

TABLE A.42

DISCRIMINANT ANALYSIS OF SELECTED
VARIABLES BY RESPONDENT GROUP: EMPLOYERS

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Goal of placement related to training	-.47	5.05	6.52	2	.72	.0001
Goal to provide competencies to obtain jobs	.94	6.87	2.26	1	.84	.0020
Difficulty no jobs available	-.44	-4.06	-3.01	9	.46	.0000
Difficulty competition with experienced workers	-.39	3.05	4.43	7	.51	.0000
Difficulty age discrimination	1.45	-5.76	-9.53	5	.58	.0000
Difficulty sex discrimination	-1.86	8.23	12.93	4	.64	.0001
Difficulty lack of transportation	.57	5.57	3.91	8	.49	.0000
Percent of new hires that are vocational education graduates	-.49	0.34	0.38	6	.55	.0000
Employer ratings of vocational education versus non-vocational education on work attitudes	.40	5.31	4.03	6	.53	.0000
Importance of high school grades		Excluded	Excluded	5	.55	.0000
Constant		-45.15	-47.31			

Eigenvalue = 1.15
Canonical Correlation = .73
Wilkes Lambda = .47
Chi Square = 40.12, df = 9, significance = .0000

Percentage of cases correctly classified = 89.83
tau = .82

TABLE A.43

DISCRIMINANT ANALYSIS OF SELECTED VARIABLES BY RESPONDENT GROUP: SELECTED GROUP VARIABLES

Variables	Standardized Canonical Discriminant Function Coefficients	High Placement Classification Function Weight	Classification Function Weight	Entrance Order	Wilkes Lambda	Significance
Percent change in per capita income	-.39	1.18	1.08	8	.40	0.0000
Percent unemployment	.70	0.21	0.33	3	.52	0.0000
Industry change	-.40	3.79	3.62	9	.38	0.0000
Goal of placement related to training	.47	9.20	14.58	6	.45	0.0000
Help previous work experience	.26	92.34	88.72	10	.37	0.0000
Difficulty no jobs available	.66	-30.71	-26.32	5	.47	0.0000
Difficulty no transportation	.54	61.03	56.06	4	.49	0.0000
Help vocational education teacher source of information about job openings	.80	-23.89	-19.07	2	.61	0.0000
Help school placement services as a source of information about job openings	.90	28.57	23.76	1	.82	0.0023
Student held job while in school	-.46	0.45	0.40	7	.43	0.0000
Constant		-464.05	-440.00			

Eigenvalue = 1.71
Canonical Correlation = .79
Wilkes Lambda = .37
Chi Square = 42.93 df = 10, significance = 0.0000

Percentage of cases correctly classified = 87.10
tau = .74

TABLE A.44
SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS

Question	Parents		Former Students		Current Students		Faculty (counselors teachers, & job placement specialists)		Advisory Council		Employers	
	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio
How much responsibility should the cooperative education coordinator have in helping vocational education students to obtain jobs upon leaving high school? (Response options: very much responsibility, much responsibility, some responsibility, little responsibility, very little responsibility)	.40	6.97**										
In general, how much difficulty does lack of available jobs pose for vocational education graduates when they are attempting to get jobs? (Response options: very much difficulty, much difficulty some difficulty, little difficulty, very little difficulty)	.37	8.61**					.38	5.37**				
What do (did) you want your son or daughter to do upon leaving the high school vocational education program? (Check one: obtain a part-time job, obtain a full-time job, self-employment, enroll in a vocational education program in a postsecondary school, enroll in a nonvocational program in a postsecondary school, enter the military service, other)	.27	4.16**										

*Significant at .05
**Significant at .01

TABLE A.44 (continued)
SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS

Question	Parents Beta	Parents F-Ratio	Former Students Beta	Former Students F-Ratio	Current Students Beta	Current Students F-Ratio	Faculty (counselors teachers, & job placement specialists) Beta	Faculty (counselors teachers, & job placement specialists) F-Ratio	Advisory Council Beta	Advisory Council F-Ratio	Employers Beta	Employers F-Ratio
Of what help is previous work experience in obtaining jobs? (Response options: very much help, much help, some help, little help, very little help)			-.72	22.55**								
During high school, in your vocational classes, did you receive instruction in writing resumes? (Response options: yes or no)			-0.47	18.50**								
Ranking of the goal for vocational education: To place students as they leave school in a job not necessarily related to their training. (Response options: 1 = most important goal through 5 = least important goal)			.47	12.77**								
In general, how much difficulty does lack of transportation to jobs pose for vocational education graduates when they are attempting to obtain jobs? (response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)			.41	9.66**	.68	27.83**						

*Significant at .05
**Significant at .01

TABLE A.44 (continued)
SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS
EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS

Question	Parents		Former Students		Current Students		Faculty (counselors teachers, & job placement specialists)		Advisory Council		Employers	
	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio
Of what help are basic education skills in obtaining jobs (Response options: very much help, much help, some help, little help, very little help)			.40	11.52**								
In general, how much difficulty does age discrimination pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)			-.32	6.82*							.64	4.75
Please list part-time work experiences during high school (inlcuding average number of hours worked per week, length of time on the job, and wage per hour before taxes.)			.38	10.86**								
Did you belong to VICA (Vocational Industrial Club of America) while in high school? (Response options: yes or no)			.29	9.03**								

*Significant at .05
**Significant at .01

TABLE A.44 (continued)
SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS

Questions	Parents		Former Students		Current Students		Faculty (counselors teachers, & job placement specialists)		Advisory Council		Employers	
	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio
Of what help was the school job placement service to you as a source of information about job openings? (Response options: very much help, much help, some help, little help, very little help, don't know)			.31	6.43*	.52	13.30**	.21	1.74*				
Of what help do you think the vocational education teacher will be to you as a source of information about job openings? (Response options: very much help, much help, some help, little help, very little help, don't know)			-.46	9.67**								
How much responsibility should the vocational teacher have in helping vocational education students to obtain jobs upon leaving high school? (Response options: very much responsibility, much responsibility, some responsibility, little responsibility, very little responsibility)							-.28	3.25*				
In general, how much difficulty does competition with experienced worker for jobs pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)							-.26	2.90**				

*Significant at .05
**Significant at .01

TABLE A.44 (continued)
SUMMARY OF STATISTICALLY SIGNIFICANT RESULTS EMERGING FROM THE MULTIPLE REGRESSION ANALYSIS

Questions	Parents		Former Students		Current Students		Faculty (counselors teachers, & job placement specialists)		Advisory Council		Employers	
	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio	Beta	F-Ratio
Of what help is the cooperative education teacher as a source of information about job openings for vocational education graduates? (Response options: very much help, much help, some help, little help, very little help)							.20	1.72*				
Ranking of the goal for vocational education: To create an awareness of the various jobs for which one might prepare (Response options: 1 = most important goal through 5 = least important goal)									.30	5.37*		
Ranking of the goal for vocational education: To provide students with competencies needed to obtain a job (Response options: 1 = most important goal through 5 = least important goal)									.35	4.34*		
Ranking of the goal for vocational education: To place students as they leave school in a job related to their training. (Response options: 1 = most important goal through 5 = least important goal)											-.32	6.50*
In general, how much difficulty does sex discrimination pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)											-.91	5.87*

*Significant at .05 **Significant at .01

TABLE A.45
DISCRIMINANT FUNCTION RESULTS:
VARIABLES APPEARING IN MORE THAN ONE RESPONDENT GROUP*

Variable Question	Respondent Groups						
	Employers	Advisory Council	Principals and Vo Ed Directors	Current Students	Former Students	Parents	Faculty
In general, how much difficulty does lack of transportation pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)	X	X	X	X	X		X
In general, how much difficulty does age discrimination pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)	X		X	X			
In general, how much difficulty does sex discrimination pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)	X	X					X
In general, how much difficulty does competition with experienced workers for jobs pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)	X	X					X

* X = the variable emerged in the discriminant function as a significant factor in the discriminant analysis procedure

TABLE A.45
(continued)
DISCRIMINANT FUNCTION RESULTS:
VARIABLES APPEARING IN MORE THAN ONE RESPONDENT GROUP*

Variable Question	Respondent Groups						
	Employers	Advisory Council	Principals and Vo Ed Directors	Current Students	Former Students	Parents	Faculty
In general, how much difficulty does a lack of available jobs pose for vocational education graduates when they are attempting to obtain jobs? (Response options: very much difficulty, much difficulty, some difficulty, little difficulty, very little difficulty)	X					X	
Ranking of the goal for vocational education: To place students as they leave school in a job related to their training. (Response options: 1 = most important goal through 5 = least important goal)	X			X			
Ranking of the Goal for vocational education: To provide the students with competencies needed to obtain a job (Response options: 1 = most important goal through 5 = least important goal)	X					X	
Of what help is (was) the cooperative education teacher as a source of information about job openings? (Response options: very much help, much help, some help, little help, very little help)		X					X

* X = the variable emerged in the discriminant function as a significant factor in the discriminant analysis procedure

TABLE A.45 (continued)
DISCRIMINANT FUNCTION RESULTS:
VARIABLES APPEARING IN MORE THAN ONE RESPONDENT GROUP*

Variable Question	Respondent Groups						
	Employers	Advisory Council	Principals and VoEd Directors	Current Students	Former Students	Parents	Faculty
Of what help is (was) the school job placement service as a source of information about job opeinings? (Response options: very much help, much help, some help' little help, very little help)				X	X		
How much responsibility should the vocatonal education teacher have in helping vocational education students to obtain jobs? (Response options: very much responsibility, much responsibility, some responsibility, little responsibility, very little responsibility)		X					X
Of what help is (was) previous work experience for high school vocational education students in obtaining jobs? (Response options: very much help, much help, some help, little help, very little help)				X	X		
Please list the kinds of work experience you have had while in high school (include average hours per week, length of time on job, and wages per hour)				X	X		
Did (do) you belong to VICA (Vocational Industrial Club of America)? (Response options: yes or no)				X	X		
Of what help is (was) the involvement of employers with the vocational school for vocational education students in obtaining jobs? (Response options: very much help, much help, some help, little help, very little help)		X					X

* X = the variable emerged in the discriminant function as a significant factor in the discriminant analysis procedure

APPENDIX E

REFERENCES
AND
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APPENDIX E

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